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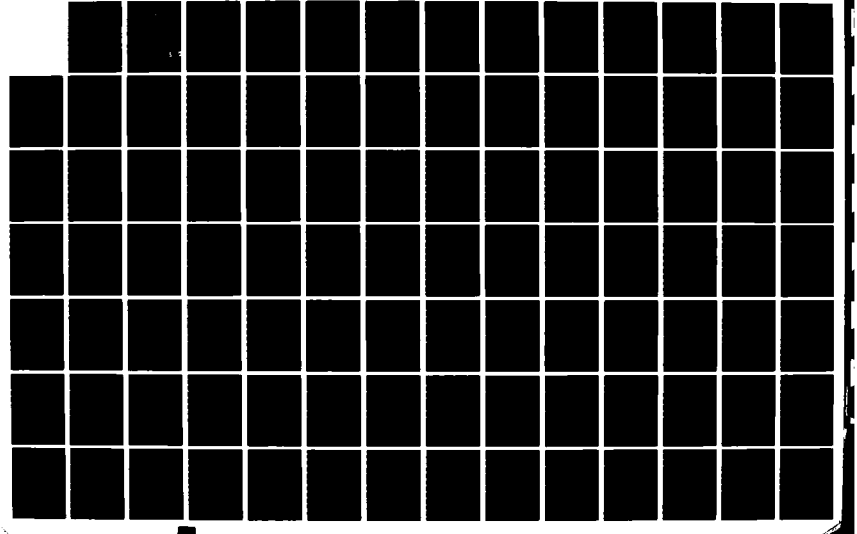

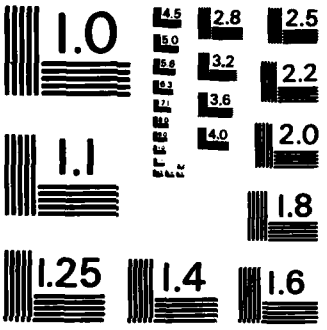

NONSTANDARD SUPPORT IN USAF MANAGED SECURITY ASSISTANCE PROGRAMS: POLICIES AND IMPLICATIONS, 1977-1985

THESIS

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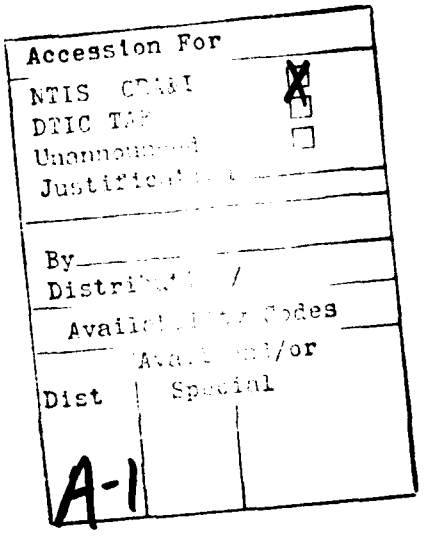

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THESIS

Presented to the Faculty of the School of Systems and Logistics
of the Air Force Institute of Technology
Air University
In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Logistics Management

Kathleen L. McLaughlin, B.S.
Captain, USAF

September 1985

Acknowledgements

I want to express my sincere appreciation for the genuine support provided to me by my thesis advisor, Dr. Leslie M. Norton. Without his patience, constructive criticism, and professional advice and guidance, this thesis would not have been possible.

I would like to thank all the wonderful professionals at HQ AFLC and the ILC for all their support. Their insight and corporate knowledge is what this thesis is all about. I would like especially to express my thanks to Mr. Richard P. Brusky, whose honesty, encouragement, and historical sense brought the nonstandard support concept together; to Dr. Bruce Wolf, who assisted me in the research effort and logical evaluation of the data; to Mr. George Gentry, who provided insight and advice; and to Mr. Jerry Lommatzsch, who provided the sense of perspective and the much needed "long lost" briefings.

Most importantly, I want to thank my wonderful husband, who provided the guiding light. His patience and strength, his support and encouragement were the cornerstone of this thesis effort. Without his love, and the Lord's gift of perseverance I could not have accomplished this.

— Kathleen L. McLaughlin

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Abstract

Changes in FMS nonstandard purchases have prompted accompanying policy and procedure changes which have not, since the 1977 Picard and Phalen thesis, been investigated. This thesis gathered, synthesized, and presented the significant policy changes which have occurred since 1977, and identified the reasons for these changes. Tne current nonstandard policy (NSIS) had its beginnings with the policies developed for the Saudi PEACE HAWK Program. The Program started with the CONDEPOT system, evolved into the NISS system, and subsequently, the current CSIS policy. Although the NSIS policy (79-1) is not identical to the CSIS, the idea of total initial and follow-on support is the same. In 1979 the CMAL 79-1 was published as guidance, and since then a proposed update, CMAL 82-1, was circulated for coordination and approval. Although the 1982 update was not implemented, it did prompt, along with AFLC NSIS Study Group conferences, proposed changes to the nonstandard concept. These changes were consolidated into an ILC May 1985 letter and are being implemented. These changes, once implemented, will take the place of CMAL 79-1; for they more clearly define and expand upon nonstandard support requirements. Now in 1985, the guidance needed for nonstandard support is finally being clarified and

formalized. The above research concluded with recommended areas for further research, and recommended areas of action for AFLC.

NONSTANDARD SUPPORT IN USAF MANAGED SECURITY ASSISTANCE PROGRAMS: POLICIES AND IMPLICATIONS, 1977-1985

I. Introduction

Overview

Security Assistance (SA), the "transfer of military and economic assistance through sale, grant, lease, or loan to friendly foreign governments", (17:I-4), has been a part of the United States' foreign and national security policy for nearly four decades. Its purpose is to enhance the defense posture of nations with which the U.S. shares political, military, and economic interests. Lt Gen Philip C. Gast, Director of the Defense Security Assistance Agency states:

> The defense of the free world is a joint and combined endeavor. The U.S. views the transfer of conventional arms and other defense articles and services as an essential element of its global defense posture and an indispensable component of foreign policy. By helping to finance arms transfers, provide economic assistance and facilitate cash sales to nations important to the U.S., the security assistance program is an integral element of foreign policy. (17:1)

The Congress authorizes and appropriates the funds for the United States Government's financed portions of SA, and has an oversight role with respect to the sale of defense articles and services to foreign countries and

international organizations. The principal legal responsibilities for SA, however, fall to the Secretaries of State and Defense. The Secretary of State has the responsibility of continuous supervision and general direction of the program, including sale approval. The Secretary of Defense has the responsibility of establishing military requirements and implementing programs of defense articles, services, and military training (16:3-1).

Although the Secretary of State is responsible for determining whether there will be a sale to a country and the amount thereof, the SA programs themselves are administered either by the Department of Defense (DOD), or by the Department of State. The Department of State administers the Economic Support Fund (ESF), Peacekeeping Operations (PKO), Commercial Export Sales, and Anti-terrorism programs, and the DOD the International Military Education and Training (IMETP), Foreign Military Sales (FMS) Financing, and FMS programs. Defense articles and services prior to 1981 were provided as grant aid through a separate program, the Military Assistance Program (MAP), which was administered differently from FMS. Legislation effective in fiscal year 1982 allowed grant funds to be merged with other funds held in the foreign governments' account. MAP and IMETP are grant aid programs administered under the authority of the Foreign Assistance Act (FAA) of 1961, where FMS programs

are under the authority of the Arms Export Control Acts (AECA) of 1968 and 1976.

Military Export Sales are categorized as Foreign Military Sales or as Direct Commercial Sales. FMS are government-to-government transactions whereby the Department of Defense purchases articles and services from U.S. firms, takes title to the equipment, or has title to the articles to be sold from U.S. stocks, and sells the articles/services to the foreign buyer. In direct commercial sales, the U.S. firm sells directly to the foreign government or international organization (17:6-1).

The United States Air Force (USAF) involvement in FMS has continuously increased. On 1 May 1978 the Air Force Logistics Command (AFLC) established the International Logistics Center (ILC).

> AFLC had long managed the distribution of equipment to foreign countries but the chore grew in size and complexity, especially after FMS overtook Grant Aid as the primary source of assistance. FMS required more detailed negotiations with potential buyers which led to Letters of Offer and Acceptance (LOAs) and, subsequently, intensive involvement by the country manager in the sales case. AFLC created the ILC to better manage the whole procedure. (46:2)

The complexity of AFLC's FMS support effort has been further compounded by the fact increasing numbers of Foreign Military Sales customers are requesting and purchasing nonstandard systems and equipment.

For the purpose of this thesis, a nonstandard article is one "with or without a National Stock Number,

which DOD does not actively manage for its own use" (23:11). The article is one no longer needed and/or authorized for procurement by the DOD, and is not, therefore, included in the Air Force inventory. A nonstandard item may encompass an entire system, such as the German F-104G, or a single item of equipment, such as the LN-33 inertial navigation system of the Saudi Arabian F-5B. The USAF, having sold or given a weapon system to a friendly nation/international organization, still accepts a responsibility under such circumstances, to provide support for that system throughout its active life. Hence, items of nonstandard support will be carried in the logistics system long after the system in foreign inventories has become obsolete by U.S. standards.

Problem Statement

As the number and types of FMS requests have changed, so have the nonstandard equipment types available for purchase. These changes have prompted accompanying policy and procedure changes which have not, since the 1977 thesis by Maj J. D. Picard and Capt M. J. Phalen, been investigated.

This thesis will determine if, how, and why the nonstandard support concepts in United States managed security assistance programs have changed since 1977. This research will, in addition, explain why the Air Force is required to provide this support and the extent to which

this support is furnished. In essence, the objective of this research is to conduct a follow-on study from the above-mentioned 1977 thesis.

Justification of Research

The USAF's involvement with FMS, and specifically nonstandard article support, has continued to increase. This increase prompted, in 1978, the formation of an International Logistics Center, as noted earlier. The ILC was created to "handle those matters which may best be described as peculiar to the sale of equipment to a foreign state" (46:3). Along with the ILC formation came a myriad of policies and procedures, including new directives, all of which added to the total of complex regulations which were already in effect. All these combined policies have dealt mainly with Foreign Military Sales; the extent of the directives on nonstandard support being very limited. Unless program managers have spent considerable time working with Foreign Military Sales and in the development of nonstandard support systems, researching information on regulations and policies currently in effect, and those under development which will directly impact their decisions, could take an inordinant amount of their time. The 1977 thesis was accomplished "to synthesize the evolution of nonstandard support theories and applications into a relatively short, concise document containing all pertinent

information" (34:7). Since this thesis, no study has been directed towards the dynamic and increasingly important area of nonstandard support.

This 1985 thesis will provide a follow-on document to the above-mentioned thesis and assist those program managers in identifying current policies, and how and why these policies have changed (since 1977).

Research Questions

The objective of this research is to conduct a follow-up study on the 1977 AFIT thesis of nonstandard support concepts. Specific questions which will be investigated to meet the above research objectives are:

1. Why does the Air Force provide nonstandard item support and what type of support have they been required to furnish?

2. How were nonstandard support items dealt with prior to and during 1977?

3. How and why have policies changed since then?

4. Is support of nonstandard items projected to continue?

Data Sources

A literature search and review was accomplished to determine the information available and the current status of nonstandard support equipment policies and procedures.

The information gathered was derived from the following sources:

1. Air Force Institute of Technology Library
2. Defense Technical Information Center
3. Defense Logistics Studies Information Exchange
4. Experts from the International Logistics Center
5. Documentation provided by the ILC

The available information was found in Department of Defense, Air Force, and Major Command level regulations, and policy letters provided the researcher during interviews. For ease of review, the information accumulated is presented in a general-to-specific format. The data begins with the Department of Defense (DOD) level, and progresses to the International Logistics Center (ILC) level.

DOD Level. Limited guidance is provided at this level. Although DOD 5105.38-M, the Security Assistance Management Manual (SAMM), establishes the general policies and procedures required to carry out the management of security assistance, specific guidance on nonstandard support articles is provided at the expediting command level.

Air Force Level. AFR 400-3 (Foreign Military Sales) states USAF policies, and explains general "procedures for conducting FMS to foreign governments and international organizations" (16:2-1). This regulation identifies, in one paragraph, the preferred method of

buying nonstandard articles and services, that is, through a direct transaction between the purchaser and private industry. Although the method is not explained in depth, the regulation does specify the program responsibilities of all organizations involved with FMS; i.e., HQ USAF, MAJCOMs, AFLC, AFSC, and ATC.

Air Force Logistics Command (AFLC) Level. The Controlled Multiple Address Letter (CMAL) 79-1 deals explicitly with logistics support of nonstandard items. It

> . . . provides guidance to be used by AFLC activities in developing, implementing, and managing weapon system sales and attendant follow-on logistics support programs, which contain items or configurations not used by a DOD component. (11:1)

Both this directive and the proposed CMAL 82-1 were developed, and in the case of CMAL 79-1, implemented two years after the publication of the before-mentioned 1977 thesis. The proposed CMAL 82-1 was sent to all ALC ILP offices for review in March 1982, and has not been implemented as of July 1985. This proposal for "Logistics Support of Nonstandard Items" was to incorporate and implement needed changes in AFR 400-3, AFM 67-1, AFLCR 65-5, and AFLCR 72-2 (see Glossary of Acronyms, Appendix A).

The Cooperative Logistics Supply Support Arrangement (CLSSA) Country Brochure describes "an agreement between a U.S. military service and a foreign military service or organization that sets forth the terms and

conditions for providing timely follow-on spares support." Nonstandard items are excluded from CLSSA because they require special management and handling.

The Customer Generated Nonstandard Requisitions Brochure provides FMS "customers with specific instructions for generating valid requisitions in support of their nonstandard requirements" (2:1). This Brochure picks up where the CLSSA Country Brochure left off. It provides the specific research techniques and requisition formats required, and is used in conjunction with the ILC Foreign Military Sales Customer Generated Requisitions Guide (of 1 March 1984).

International Logistics Center Level. The Nonstandard Item Support (NSIS) Concept Paper developed by Mr. George Gentry was presented to the October 1984 AFLC Nonstandard Item Support Review. This paper presented, and the Review Minutes which followed, identified changes required in AFM 67-1 and AFR 400-3, and provided milestones to insure these changes would be incorporated into the above stated regulations by the end of January 1985. In June of 1985, draft policy and procedural changes based on this October 1984 Review, and the before-mentioned proposed CMAL 82-1, were forwarded for implementation.

Publication Level (AFIT). The 1977 thesis, "Nonstandard Support Concepts in USAF Managed Security

Assistance Programs," is a concise document which follows the development of nonstandard support theories, identifies reasons for the support, and concludes that, "although the USAF has been involved with nonstandard support for many years, it has not yet fully defined the problem nor completely identified its impact." This research is a follow-up study based on the authors' recommendation that their "thesis should be updated yearly so that it can be used as a handbook for training and reference by people involved in nonstandard item support" (34:135).

Publication Level (Defense Institute of Security Assistance Management). The DISAM Journal verifies specific regulations are currently under revision and are due to be completed during the current year.

Summary. Although much information is available on Foreign Military Sales, the extent of the documentation on the nonstandard article portion of FMS is limited. Library research provided few applicable references; thus, to obtain pertinent and up-to-date information, two information gathering techniques were used; the first and most prevalent being review/research of current documentary sources, and the second being personal interviews.

Review/Research of Literature. Two distinct areas of literature were researched. The first consisted

of research reports derived from the Defense Technical Information Center and Defense Logistics Studies Information Exchange. Included were theses, research reports and studies, as well as DOD, Air Force, and operating command regulations. The regulations served to identify the constraints within which Foreign Military Sales and nonstandard support systems must operate.

The second area consisted of minutes of meetings, messages, policy letters, and recorded briefings originated by those individuals who have daily worked with nonstandard support; that is, those being interviewed.

Personal Interviews. The second information gathering technique used was personal interviews conducted with International Logistics Center personnel, specifically the Plans and Policy Management, Computer Software experts, Country managers, Division Chiefs, and the ILC Commander's executive officer, as well as knowledgeable members of the Air Force Institute of Technology staff and personnel of the Air Force Logistics Command Headquarters. These interviews provided the interpretation of documentation, and insight into the prevailing issues. The interviews were conducted in an unstructured manner, their focus primarily on researching current and historical data available, and on identifying pertinent issues requiring resolution.

Scope and Limitations

This research topic will identify the directives and procedures as they have developed along with the evolving nonstandard cases. This research topic is limited to nonstandard support policies and accompanying examples, and will address only unclassified material.

Methodology

The research approach consisted of the identification of current policies and procedures, and the tracing of any recent/planned changes. The purpose was to identify if and how the policies have changed, and to identify the main drivers in the policy changes.

The research will be presented in five chapters. Chapter II will review the before-mentioned 1977 thesis. Chapter III will identify policy and procedure changes from 1977 to the current time. It will explain the Saudi Arabian PEACE HAWK/PACER GONDOLA Program; the program from which the standardized nonstandard policies were to have been evolved. Chapter IV will summarize the actual evolution of the current policies, and the projected changes in the procedures and regulations covering nonstandard support. Finally, Chapter V will answer the research questions of Chapter I and will present the conclusions and recommendations of the author.

II. 1977 Thesis Review

Introduction

This chapter summarizes the 1977 thesis by Maj James D. Picard and Capt Michael J. Phalen, Nonstandard Support Concepts in USAF Managed Security Assistance Programs. All information is derived, verbatim or otherwise, from the above thesis.

The purpose of this condensation is to provide a starting point; a beginning from which to identify policy and procedural changes which have occurred. It is not presented as an analysis, only as an identification of the status of nonstandard concepts as they were prior to and during 1977. This entire chapter has been drawn from the 1977 thesis, and, in instances where it appears clearer to the authors' intent, verbatim quotations have been used.

Thesis Summary

Background. Major Picard and Captain Phalen began their thesis by noting the growth of FMS and the accompanying authorizing legislation. This section will present a summation of this; that is, it will present a history of Foreign Military Sales as explained by their thesis.

Assistance in establishing and maintaining adequate defense postures has been a basic tenet of the U.S.

foreign policy since World War II; the 1947 National Security Act and the 1949 Mutual Defense Assistance Act forming the foundation for U.S. support. The Marshall Plan of 1948, although economic in nature, was also instrumental in setting the tone for military security assistance programs. Throughout this early period, U.S. support was in the form of grant aid, and military assistance was mainly confined to loans or gifts of surplus or obsolete U.S. equipment.

Security Assistance programs have undergone significant changes; changes which have reflected the evolutionary nature of U.S. foreign policy. The Mutual Security Acts of 1951 and 1954, and the Foreign Assistance Act of 1961 reaffirmed the policy that U.S. security was strengthened by assuring the security of other free and independent nations through authorizations for common defense. A trend toward FMS developed as legislation reflected a growing awareness that grant aid programs could not continue indefinitely. This awareness was reflected in the 1968 Foreign Military Sales Act, which required the replacement of grant programs with sales agreements when the recipient nation(s) achieved economic self-sufficiency. This Act established the U.S. policy for conduct of military export sales, and categorized these sales into two components: commercial sales (direct negotiation between the foreign

country and U.S. industry), and FMS (government-to-government transactions).

Two-thirds to three-fourths of all military exports were FMS vice commercial sales because the foreign nations preferred to buy from the DOD where they realized cost savings, more favorable payment terms than could be obtained through commercial sources, and most importantly, quality follow-on support.

The 1976 International Security Assistance and Arms Export Control Act substantially modified both the 1961 Foreign Assistance Act and the 1968 FMS Act by taking action to phase out grant aid further, provide for increased congressional surveillance and supervision of FMS, and restrict the sale of major defense equipment (sales to $25 million or more) to FMS transactions.

The USAF has become increasingly involved in Foreign Military Sales, and increasing numbers of FMS customers are requesting and purchasing items and systems which are not procured for USAF use; that is, they are asking for and purchasing nonstandard items. The policy regarding this nonstandard support is stated in AFM 400-3 which reads, "when directed by the Office of the Secretary of Defense (OSD), nonstandard equipment may be purchased and follow-on support provided."

Defining the Nonstandard Support Problem. For the purpose of the 1977 thesis, a nonstandard item was defined as any item, with or without an NSN, which is neither managed nor used by a DOD activity.

The increasing number of FMS cases involving nonstandard systems identified that foreign customers are actively participating as buyers in the international marketplace. Not only must FMS programs support U.S. policy objectives, they must also be acceptable to the buyer. FMS customers are not willing to purchase from the U.S. under conditions which serve the interests of the seller only; they expect their interests and desires to be considered.

Foreign customers may wish to purchase a nonstandard item or change the configuration of a standard DOD system for a number of reasons which include:

1. National pride: a sense of prestige from owning a particular piece of equipment;

2. Incorporation: provide the opportunity to incorporate into a proven weapon system equipment it has manufactured itself;

3. Inability to secure a standard item: caused by the item not being available during the required time frame, or by restrictions placed on selling the item for security reasons;

4. Perception of a unique requirement which can be best satisfied by a different piece of equipment than is installed in the standard system;

5. Ease of maintenance: if a subsystem already exists in their inventory, they may save by procuring the same subsystem in another weapon system; and,

6. Influence of manufacturer advertising efforts.

Another aspect to the sale of nonstandard items/ systems is the intentions of the United States Government, which may or may not coincide with the previously-mentioned customer reasons for buying these types of items. Reasons the U.S. may encourage or support the sale are:

1. The U.S. wants a country to have certain capability incorporated into a weapon system the country either currently possesses or is procuring to cope with a threat perceived by the U.S.;

2. Desire to improve the maintenance capability of a country;

3. To benefit from the country's experience with the item at reduced or no cost at all;

4. To restrict the capability of a country;

5. To use as a political lever: a country which purchases a nonstandard item from the U.S. becomes dependent on the United States for support; and,

6. To stimulate our economy, and help our balance of payment posture.

To assist our friends and allies in meeting their defense needs, the U.S. sells not only weapon systems, but initial and follow-on support for these systems. These requests for follow-on support of the purchased systems stem from a desire of the FMS customer for a standardized .nterface with the USAF logistics system, and the fact some customers require the more professional and detailed program management capabilities of the USAF.

AFLC has identified three basic approaches which they have used in follow-on support of nonstandard FMS equipment:

1. No AFLC involvement: all support is arranged between the country and the contractor;

2. Limited AFLC involvement with maximum contractor support with AFLC providing visibility and control only; and,

3. Normal AFLC organic logistics support for nonstandard items.

The important points to remember are: (1) that although AFLC has identified three basic approaches for follow-on support, the only guidance available for nonstandard case support at the publication of this thesis was AFM 400-3 which stated, ". . . when directed by OSD, nonstandard equipment may be purchased and follow-on support provided"; and, (2) that the AFLC approach to nonstandard was not, it itself, standardized. Each nonstandard case

was identified as unique, and thus the services provided by the Logistics Command were tailored to the requirements of each customer.

Service Complications Involved in Nonstandard Support. Because each case was supported uniquely, development of a standardized policy was difficult. Following the policies which were available, AFR 400-3 and the three approaches to follow-on support identified by AFLC, was complicated by the services required for each case. Not only did the functional areas involved in providing nonstandard support vary from case to case, so also did the services provided; each case included one or more of the following services:

1. Provisioning: the development of appropriate provisioning documentation, assignment of source, maintenance, and recoverability (SMR) codes, maintenance factors, and computation of quantitative requirements. The system manager air logistics center (SM/ALC) does this for standard, and could do this for nonstandard items as well, or a contractor under surveillance of the SM could perform these functions;

2. Cataloging: the identification of an item. Methods include the use of part numbers, ALC assigned control numbers, and national stock numbers (NSNs). For a nonstandard item to be stocklisted in standard U.S.

publications, it must be compared with the Defense Logistics Services Center (DLSC) to determine if it is nonstandard, and DLSC must assign an NSN. Once this action is completed, source of supply and unit price can be associated with the NSN and included by AFLC into the Air Force cataloging records;

3. Supply/Maintenance: storage, distribution, and repair; involving establishment of a stockpile of parts, development of requisitioning and routing procedures, provision for order and shipment status, monitoring of finances, repair and shipment of parts, and obtaining reimbursement.

4. Technical Orders (T.O.s): nonstandard item data has not been authorized for inclusion in the AF T.O. System. As a result, several areas pertaining to nonstandard support must be addressed: designation of an organization to manage these T.O.s, development of procedures for the administration of the program, identification of writers and publishers, and methods for instituting Time Compliance T.O.s (TCTOs);

5. Material deficiency reporting: the areas of material deficiency reporting for nonstandard items are similar to those concerned with standard items;

6. Configuration: the choice of using standard USAF procedures or using specialized ones, and the decision of who will administer the program;

7. Engineering services: support for nonstandard items is a unique situation for the original manufacturer may be the only one who has design data on it. Assigning responsibility for engineering, determining the types of services to be provided, and establishing the data collection and analysis system in support of the engineering efforts are some of the factors to be considered in providing this service; and

8. Requirements computation: requires assignment of responsibility for these computations as well as the determination of factors associated with the storage, issue, and maintenance of the equipment. Methods of assuring a stable source of supply and firm or not-to-exceed prices must also be developed.

After the above services have been identified and provisioned for, costing procedures must be developed, and manpower obtained to support their accomplishment. The costs of FMS are borne by the customer and thus all operations and maintenance costs must be accounted for. Manpower will be required; some of which may be absorbed by existing USAF personnel, some of which may require additional manning or transfer to a contractor.

It is clear from the myriad of individual case requirements, and the lack of original detailed procedures for nonstandard support, that the development of a

standardized policy which could be applied to all nonstandard cases across the board was difficult and slow in coming.

Efforts to Derive a Nonstandard Policy. Two major programs were developed by AFLC in an effort to standardize nonstandard support: the PEACE HAWK/PACER GONDOLA program, and the Nonstandard Support Study Group. These two efforts were researched by the authors of the 1977 thesis to identify the evolution of nonstandard item support concepts.

PEACE HAWK/PACER GONDOLA. PACER GONDOLA was the program which began the series of attempts by AFLC to standardize nonstandard item support. This program dealt with the Saudi Arabian PEACE HAWK program specifically, and procedures derived from this program were eventually to be applied to all nonstandard FMS cases. To understand PACER GONDOLA, PEACE HAWK must be explained.

The PEACE HAWK Program was one of the most extensive FMS programs ever managed by the USAF, and involved sales of standard and nonstandard material to Saudi Arabia. On 28 June 1971, the Saudi Arabian Minister of Defense and Aviation (MODA) signed a Letter of Offer (LOA) for 20 F-5B aircraft and support equipment (PEACE HAWK I). On 29 September 1971, an LOA for 30 F-5E aircraft and support equipment was signed (PEACE HAWK II). The F-5B and E aircraft sold in these two programs had six nonstandard systems,

containing approximately 300 nonstandard stock items. In April 1972, the Royal Saudi Arabian Air Force (RSAF) determined they did not have an adequate maintenance capability and requested the USAF establish a contract on their behalf with Northrop Aircraft Division (NAD) for these services (PEACE HAWK III). The program was to end 15 August 1975, but was extended to 15 February 1976 at a price of $265.7 million. On 4 January 1975, an LOA was signed for 20 F-5Fs, 40 F-5Es, two simulators, an extensive aircraft improvement program, and support equipment (PEACE HAWK IV). This LOA added approximately 7,000 nonstandard line items which required support. PEACE HAWK V was a continuation of the PEACE HAWK III extension for maintenance, training, and construction support. The services provided would be applicable to PEACE HAWK IV as well. PEACE HAWK VI, involving the sale and delivery of four F-5Fs configured as the PEACE HAWK IV aircraft, was initiated on 30 January 1977.

It was clear as the PEACE HAWK program progressed, nonstandard items proliferated, and the USAF became increasingly aware of their implications for support. The very first actions inaugurating the PACER GONDOLA program were in July of 1974, when the Air Staff initiated a study to examine all aspects of SA in the Air Force. The study's final report, titled the Security Assistance Impact Study (SAIS), was the first major document which officially recognized that the requirement to provide nonstandard

support was creating a significant impact on USAF resources. The SAIS was approved by the AF Vice Chief of Staff on 12 April 1975 and Air Staff was directed to place top priority on resolving the issues. Actions resulting from this tasking included changes to AFR 400-3, AFLC developing interim procedures for country peculiar T.O.s available to the Saudi PEACE HAWK case, and AFLC holding a series of meetings dealing with nonstandard support requirements in general. The concepts developed during these AFLC meetings were finalized by the Air Force Logistics Command in September 1975, and presented to the Air Staff on 2 October 1975. The essential feature of the new concept was the AFLC recommendation of limited AFLC involvement in nonstandard support after initial delivery, and maximum reliance on the contractor to provide follow-on support. This approach relied on the use of contractor manpower and standard USAF management systems, the contractors functioning as Mini-Air Logistics Centers for nonstandard items, and was called the Contractor Depot (CONDEPOT) system. The CONDEPOT system was one in which the material support operation used by the contractor functioned as an AFLC/ALC under guidelines of the USAF Depot Supply Support Program, and in which the contractor operated depot computed requirements covering operating stockage in-country, pipeline items, and stock levels. The Air Staff approved the support concept and AFLC directed San Antonio ALC (SA-ALC) take

the lead in developing the nonstandard support procedures.

SA-ALC recommended that either all nonstandard items be brought into the AF inventory and receive the same logistics support and management as standard items, or that AFLC HQ develop the detailed procedures for nonstandard support with input from all the ALCs. These recommendations were not accepted by AFLC HQ, AFLC insisting SA-ALC develop the detailed nonstandard support procedures for the PEACE HAWK Program, stating the procedures developed were to eventually be extended to all nonstandard support cases (upon the approval of the Air Force Chief of Staff). SA-ALC thus resumed development of nonstandard support procedures, code named PACER GONDOLA, culminating in a set of draft Nonstandard Item Support System (NISS) instructions. The draft provided that the USAF negotiate contractually with private industry those logistical services associated with maintaining visibility, surveillance, and control of material, from acquisition through the delivery and follow-on support phases. It prescribed minimum services the FMS customer was required to accept, and recognized that fundamental to logistics support under FMS was a tailored interface which assured the customer's logistic system functioned effectively with the USAF system. It emphasized that implementation of policies and procedures must have as its objective limited USAF involvement

with maximum contractor support. The PACER GONDOLA program, i.e., the activation of the proposed NISS concept, was scheduled to be completed and in effect in June of 1976. As of 1977 it had not been implemented.

Nonstandard Support Study Group. Because of the slippage of the PEACE HAWK derived PACER GONDOLA Program, AFLC recommended the establishment of an AFLC ad hoc study group to evaluate how the USAF should evaluate each FMS request to determine the optimum approach to support nonstandard configured systems.

The first issue the group addressed was the definition of what constituted a nonstandard item; an issue upon which there had been considerable disagreement. The definition proposed and accepted was a nonstandard item was any item with or without an NSN which is neither managed nor used by a DOD activity. The group additionally identified the following two basic alternatives available to FMS customers: (1) Direct country-to-contractor arrangement, and (2) U.S. Government (USAF) support, which is AFLC organic, contractor support through AFLC logistics system, or a combination of both. The group identified three distinct phases of FMS support and the accompanying AFLC support responsibilities: (1) Phase I--Precontract award: characterized by identification of data requirements; (2) Phase II--Initial support: where AFLC participates with

AFSC in establishing initial in-country support; and (3) Phase III: Follow-on support where AFLC is totally responsible for logistics support.

The primary objective of this study group was the development of evaluation criteria which could be used to determine the impact of nonstandard configured items upon AFLC resources, and thus the group also proposed the following decision model:

Step 1: evaluate the requirement;

Step 2: determine the impact of nonstandard items on AFLC, including cost and source data on products/services necessary to support the program;

Step 3: apply criteria; that is, AFLC should apply impact factors against policy and the determinants of country wishes, program priority, time frame, AFLC capability, country capability, and identifiable costs;

Step 4: select support concept based upon application of criteria against policy/determinants;

Step 5: develop nonstandard support case;

Step 6; present nonstandard support case to country; and

Step 7: country evaluation of support case; i.e., based upon evaluation of the case as presented in the Letter of Agreement (LOA), the country should accept or reject the proposed support case. Rejection would require direct country-to-contractor support arrangements.

On 17 August 1976, the group chairman presented the results to the AFLC Chief of Staff with the following recommendations:

1. That nonstandard be addressed during the Price and Availability Phase;

2. That the support concept be determined independently for each nonstandard configured system; and

3. That some tasks might better be accomplished organically while others should always be contractual.

The recommendations were approved and manpower was allocated to accomplish the final evaluation and implementation tasks of the study.

Summary. Through both these programs, the ad hoc AFLC study group, and the PACER GONDOLA program, AFLC moved toward standardizing nonstandard support. At the time the 1977 thesis was published, both programs had been accepted by AFLC Headquarters and were due to be implemented. As will be shown in the next chapter, the PACER GONDOLA program became Saudi specific, and the recommendations of the study group eventually evolved into the CMAL 79-1.

Contemporary Cases Involving the Nonstandard Program. Three specific cases were researched by Major Picard and Captain Phalen, and although these cases were not identified as serving as examples of lessons learned, this author contends they do just that. After the PEACE

HAWK case, previously explained, the F-104G case, and the Iranian case are reviewed, one can see the complexity of the problem of attempting to standardize nonstandard programs.

German F-104G Program. The German F-104G was an example of AFLC organically supporting an entire system which was never in the USAF inventory.

F-104 development began in the U.S. in 1951, and 18 different versions have evolved from the original design. In 1956, the Federal Republic of Germany (FRG) began an inquiry to determine the need for a new fighter for its Air Force, and determined that although the "pure" F-104 would not meet their requirements, a modified version would be acceptable; the version being a single-seat, multi-purpose combat aircraft. In December 1958, the FRG began discussions with Lockheed on configuration and contractual arrangements regarding the licensing of foreign countries to manufacture the U.S. designed F-104; the agreement resulted in the design of the new F-104G. In February 1959, Germany contracted with Lockheed for 96 U.S. manufactured aircraft to be delivered fully assembled, and in March purchased licensing rights to build its own aircraft in Germany. Late in 1959, Belgium and the Netherlands decided to integrate the F-104G into their inventories, and entered into an agreement with Germany to coproduce the aircraft

in March 1960. Italy joined the other three countries, and the four-nation European Consortium was formed. On 17 December 1960, the details of the technical and financial arrangements between the U.S. and the four European countries were finalized in a Memorandum of Agreement (MOA); and subsequently, additional licensing agreements between U.S. companies other than Lockheed and Consortium countries were concluded where necessary to produce F-104Gs in Europe. In this same year, the Consortium countries recommended to the North Atlantic Council, a NATO organization, that the F-104G Consortium Program be adopted as a NATO project and the Consortium be adopted as the controlling structure. The recommmendation passed in late 1961 and the NATO F-104G Starfighter Production Organization (NASMO) was established. The NASMO controlled the efforts of the Consortium producers; it reviewed and made recommendations on all design changes prior to final approval by the NASMO Board of Directors, effectively eliminating unauthorized modifications. The U.S. Government became involved with the funding of the F-104G aircraft. Because FRG was economically stable, it purchased its aircraft directly from the controlling body of the Consortium. The other three Consortium countries received U.S. assistance in the form of direct financial support. On 4 January 1961, HQ USAF assigned executive management responsibility for the F-104 Military Assistance Program (MAP) and the role of worldwide

weapon system coordinator to the Air Materiel Command. It also directed Air Research and Development Command to provide engineering and development support for the MAP F-104 program. This action was significant for the F-104G was never intended to be incorporated into the USAF inventory, and as a result, the USAF became involved with all areas of follow-on support. Some deviations to normal USAF policy were required because the F-104G was not originally designed as a USAF weapon system and because some normal procurement policies and directives were at variance with those of the MAP. Although no F-104G aircraft are in the USAF inventory, as of 1977, we were still involved in the follow-up logistical support of this system. SM/ALC continues to have prime responsibility for the system, and requirements determination was performed according to standard USAF practices. Also, nearly all reparables for USAF supported aircraft were repaired under contract by Lockheed.

This example is important because the F-104G, for all practical purposes, was supported as a standard USAF weapon system. NOTE: the authors did not explain in depth the exact support procedures used for the F-104G; they stated only that the system was supported as a standard system. Later, when CMAL 79-1 is discussed, it will be seen that nonstandard cases are broken out into cases dealing only with nonstandard items, and that they are not, according to policy, to be treated the same as standard cases.

Nonstandard Item Support Concepts for Iran. How the support concept evolved from implementing an LOA supporting a single type of nonstandard system, to developing an LOA which encompassed all of one country's nonstandard equipment is of great interest and should be viewed as a potential support concept for future nonstandard FMS cases.

The initial attempt at providing nonstandard item support to the Imperial Iranian Air Force (IIAF) was represented by the FMS case AF-IR-BAS (later changed to GGS). The LOA covering this case was signed on 16 September 1975; its purpose, to provide nonstandard AGE and spares directly from McDonnell-Douglas Corporation in support of PEACE ROLL (the program which covered the sale of F/RF-4E aircraft). In December 1975, AFLC briefed the IIAF on the proposed nonstandard support concept; essentially the same concept proposed for use in the PEACE HAWK Program. In May 1976, AFLC requested McDonnell-Douglas develop a Statement of Work (SOW) for nonstandard support of the F/RF-4E aircraft. In July 1976, a joint team from AFLC and Ogden ALC visited the Corporation to review the requirements with the contractor, and the requirements for nonstandard support for the F-4E was deleted. The contractor therefore prepared a proposal for support of 12 RF-4E aircraft. During September 1976, it was determined since the LOA included

both F and RF-4E, the SOW should have included the F-4E. Action was taken to have the contractor review his proposal. On 21 February 1976, an LOA was negotiated and signed by the IIAF for support of nonstandard items installed in all current and future F-5 aircraft. In July 1976, a request for a Not-to-exceed (NTE) proposal for nonstandard support for the F-5 aircraft was forwarded to Northrop Aircraft Division (NAD). In November 1976, the NAD budgetary proposal received in response to this request was disapproved, and during this same time period, administrative actions were taken to consolidate nonstandard support cases for both the F-4 and F-5 series aircraft. The LOA for the consolidated case was signed on 30 July 1976, and nonstandard support was thus funded for both the F-4 and F-5 aircraft. The IIAF recognized they were acquiring other nonstandard systems which would require similar support and indicated they would be receptive to an additional FMS case to fund nonstandard support requirements over and above those currently authorized in the current case. A final additional case was prepared and designed as an open-ended nonstandard support case. The LOA provided for nonstandard support of all major systems in the IIAF that are managed within the USAF, including those previously requested. NOTE: again, the authors have not provided the specifics of how the F-4 and F-5 aircraft were supported. No information was

provided to identify whether the USAF stocked all the nonstandard parts, or whether some other support system was used. This author thus concludes this example serves only as one identifying the evolution of the LOA concept; one where initially only one nonstandard item was identified for support in an LOA, to a then current LOA which covered all nonstandard requirements for one country.

Conclusion. The PEACE HAWK, F-104G, and Iranian cases serve as examples of the difficult task AFLC had undertaken in attempting to develop one set of procedures and policies which would apply to all nonstandard cases. Each of these three cases were, and still are, unique; they each had requirements in their own right. The PEACE HAWK Program, from which PACER GONDOLA derived, has shown that there are still cases now, as there were in 1977, which must be supported differently from "routine" nonstandard cases. The F-104G program has shown that some nonstandard cases were, for all practical purposes, handled as standard cases; and the Iranian case has shown that the concept of separate LOAs for each nonstandard item requiring support is not necessarily the best approach. In the Iranian example, the concept evolved toward an LOA which covered all that country's nonstandard support requirements.

Each of these cases were singularly different and this necessitated they be treated differently. The attempts

to standardize nonstandard support concepts must be flexible; these concepts can and should be tailored by weapon system and country. Also, in finalizing a nonstandard support concept for any FMS customer, the objectives of the efforts to establish a self-sufficient integrated logistical system must be fully considered. At the time of the publication of the 1977 thesis, the AFLC approach appeared to be moving in this direction, and significant advances had been made in integrating nonstandard item support into the total logistic effort.

Conclusion

The thesis by Major Picard and Captain Phalen researched three cases of nonstandard support; the PEACE HAWK program, the F-104G program, and Iranian support concepts, and identified some of the principle problems encountered when working with this type of support. They identified the initial attempt to develop procedures which could be used for across-the-board FMS nonstandard cases; that is, the PACER GONDOLA program derived from the Saudi PEACE HAWK program. They addressed that concurrently, an AFLC ad hoc committee was researching the same nonstandard support question, only with all FMS countries in mind. This committee was attempting to develop guidance not based on one country's unique requirements, but based on nonstandard support problems faced by all FMS cases. In addition to the PACER

GONDOLA and ad hoc committee's activities, the development of the new concept of an all-inclusive LOA, based on the Iranian case, had an impact on the development of current USAF policies and procedures dealing with nonstandard item support. As of publication of the 1977 thesis, the only guidance available was that presented in AFR 400-3, that nonstandard equipment could be purchased and follow-on support provided when directed by the Office of the Secretary of Defense.

The thesis was considered an initial effort in defining the overall nonstandard problem, and functioned as such by collecting, synthesizing, and recording significant nonstandard support issues and cases which have confronted the USAF in the past and which can be expected to have implications in the future. The conclusions reached by Major Picard and Captain Phalen were eight in number:

1. Sales of nonstandard items continue to increase, and initial follow-on support for these items must be provided when directed by higher authority;

2. The USAF has been attempting to formulate a nonstandard support policy since 1974, but has not succeeded;

3. There appears to be little identifiable effort by DOD, USAF, or DSAA to reject or even actively discourage FMS customer requests for nonstandard items;

4. There is no evidence the additional workload generated by nonstandard item support is considered when the USAF is directed to provide this support;

5. Coordination between AFSC and AFLC in the sale of nonstandard systems and the development of nonstandard item support concept had been deficient in some cases and nonexistent in others;

6. There appears to be a great disparity in the handling of nonstandard support concepts;

7. The issue of nonstandard item support is not only a significant problem in itself but is also a symptom of a greater disorder--the current pace and direction of FMS dictate the USAF operate as a vendor or supplier who in turn must subcontract for the necessary supplies and services; and

8. The uniqueness of each FMS case, compounded by the many different types of nonstandard items and support, dictates the necessity for broad policy guidance within which flexibility can be exercised in response to the unique aspects of each case.

The USAF has been faced with the issue of nonstandard item support for FMS customers for many years and, as of seven years ago, it had yet to fully define the problem, let alone solve it. The first step will be to develop adequate policy guidance, and this can come only by accomplishing the authors' recommendation for further research.

NOTE: because the thesis did not fully develop the CONDEPOT or the NISS programs, and they are vital to understanding the evolution of nonstandard support, they will be addressed in Chapter III, "Nonstandard Support Policy Evolution."

III. Nonstandard Support Policy Evolution

The purpose of this chapter is to follow the evolution of nonstandard support from the Contractor Depot (CONDEPOT) and subsequent Nonstandard Item System Support (NISS) systems, to the current Country Standard Item Support (CSIS) program.

Nonstandard support became a real problem with the continued sale of the F-5 aircraft to Saudi Arabia. With each sale came an increased demand to support nonstandard subsystems/items; PEACE HAWK III identified 12 such subsystems, PEACE HAWK V identified 26 (4:1), and the current PEACE HAWK phase IX identifies an initial 53 subsystems, with many additions anticipated (35). This increasing demand resulted in two methods of support being developed specifically for the PEACE HAWK programs: CONDEPOT and NISS (not to be confused with Nonstandard Item Support (NSIS)). These procedures were originally developed to eventually be applied to all other nonstandard cases; but, they became rather, the exception to the current NSIS policies (CMAL 79-1).

Because the evolution of the supporting nonstandard procedures can best be understood as illustrated by the phased sale of F-5s, and because the current NSIS policy has its roots in the PEACE HAWK programs, it is both

logical and important we begin our study with a brief review of what the Saudi programs involved.

Saudi Arabian PEACE HAWK Program

The 1977 thesis was published in June of 1977, as PEACE HAWK VI was being initiated, and PEACE HAWK IX is now being implemented.

The PEACE HAWK program is a multi-phase program whose purpose is to provide the RSAF with F-5 aircraft, simulators, and support. As of 1 January 1985, its total cost has been $5,043.6 million (M) (45). It began on 28 July 1971, when the Saudi Arabia Minister of Defense and Aviation (MODA) signed a Letter of Offer and Acceptance (LOA) for 20 F-5B aircraft, spares, and support equipment (39:1). The program has since continued, with nine identifying phases, the specifics of each are represented below (39:1; 45).

PEACE HAWK I: 20 F-5B aircraft, spares, and support equipment;

PEACE HAWK II: 30 F-5E aircraft, spares, support equipment, and munitions;

PEACE HAWK III: aircraft maintenance, training, and construction in support of I and II aircraft from 15 August 1972 through 15 February 1976;

PEACE HAWK IV: 40 F-5E and 20 F-5F aircraft, spares, support equipment, two flight simulators, munitions, and an extensive program to improve aircraft systems of II and IV aircraft;

PEACE HAWK V: continuation of aircraft maintenance and training through 15 February 1979, and construction program to ensure facility modernization maintained

pace with hardware upgrading (construction of 3 Saudi sites; Dhahran, Taif, and Khamis);

PEACE HAWK VI: four F-5F aircraft. PEACE HAWK I, II, IV, and VI cost was $1,001.6M;

PEACE HAWK VII: Command, Control, and Communications (C3) Technical Assistance Field Team (TAFT), continuation of support services, supply assistance, aircraft maintenance and training through 15 February 1982, and construction. Contract extended through 15 August 1982. PEACE HAWK III, V, and VII cost was $3,215M;

PEACE HAWK VIII: 36 month follow-on to PEACE HAWK VII, mission support services, and training, at a cost of $628M. Implemented in February 1982;

ATTS: F-5 Aircraft Technical Training Support (ATTS). Follow-on to PEACE HAWK VIII, mission support services, and training. Requirements definition for a competitive procurement was underway January 1985;

PEACE HAWK IX: 10 RF-5E aircraft, special and multi-purpose cameras and sensors, support equipment, and logistics support services, at a cost of $199M. Delivery is scheduled for the first and second quarters of Current Year (CY) 1985.

TOTAL: 124 F-5 aircraft, support, training, and construction, with a total cost of $5,043.6M.

Since the first program, PEACE HAWK I, the number of nonstandard items requiring support has continued to increase. PEACE HAWK I and II identified approximately 300 nonstandard stock items; PEACE HAWK IV added around 7,000 additional items; PEACE HAWK V supported a total of 15,000 line items (4:2). As of September 1984, cases of nonstandard support which exceeded a total of $9M annually had been worked; these cases dealt with nonstandard spares, repair/return, and T.O. updates (5:38). As the numbers of

items supported have changed, so have the methods of support. PEACE HAWK I through III saw the CONDEPOT system realized. Between PEACE HAWK III and V, the transition to NISS was accomplished; and on 20 January 1979, the final and current policy, CSIS began. Each of these systems of non-standard support of the F-5 aircraft will now be discussed, indicating how and why the first system led to the development of the successive systems.

CONDEPOT--PEACE HAWK Phases I through III

The Contractor Depot system, or CONDEPOT, was in effect through PEACE HAWK III. This system was one where the contractor, Northrop Corporation, acted as a mini-Air Logistics Center. The contract F41608-76-C-A400 implemented the CONDEPOT, and insured the corporation operated under guidelines provided by the USAF Depot Supply Support Program (30:14). The contract costing $5.6M covered 1200 line items and 12 systems, and provided for follow-on spares, configuration management and reporting, material deficiency report (MDR) actions, technical publications and data support, requisitioning and distribution, component repair and support, spares procurement, peculiar system ground support equipment (GSE) replenishment, and most importantly warehousing (4:1). The Northrop Corporation maintained a bonded warehouse, and supplies were kept in the U.S. until required in Saudi Arabia (12; 31). The specifics

of the program are sparse, and the only information available has been presented above.

Although the contract with Saudi Arabia which implemented this system of support was valid through 15 February 1979, pressure was placed on AFLC by the Air Staff to develop a set of standard procedures which could be used for all FMS contracts featuring nonstandard items. This pressure led to SA/ALC developing a set of nonstandard support procedures (NISS); the development of which was code named PACER GONDOLA. Whether it was Air Staff pressure, or the Saudi Government wanting to maintain their supplies in-country, or the Northrop Corporation no longer wanting to maintain a bonded U.S. warehouse, or whether it was a combination of all three which ultimately led to the development of a new system, NISS, is difficult to ascertain (12; 31). Nonetheless, the procedures were developed, based on the Saudi case with the plan being that these new procedures would eventually be applicable to all nonstandard FMS cases. As it happened, however, the procedures developed were used only for the Saudis.

PACER GONDOLA/NISS--PEACE HAWK
Phases III through V

PEACE HAWK III had been in effect through February 1976, and the proposed NISS concept which was scheduled to be completed and in effect in June of 1976, had not as of the 1977 thesis publication, been implemented.

How CONDEPOT and NISS Differed. During the transition period between the two concepts, nonstandard items were defined as those items, equipment, and/or subsystems, which were not incorporated in or used to support USAF aircraft or equipment, and the following seven elements were to guide the management of these items:

1. Cataloging,
2. Configuration accounting,
3. Engineering services,
4. Materiel deficiencies reporting (MDR),
5. Provisioning,
6. Technical publications, and
7. Requisitioning/distribution.

Of these seven elements, the CONDEPOT had covered totally only the engineering and provisioning services. Configuration accounting, MDR, Technical Publications, and Requisitioning/Distribution services were partially covered, and only when NISS was introduced was the function of cataloging nonstandard support items adequately addressed. Also, the concept of the contractor functioning as a mini-ALC was changed; the Northrop Corporation no longer maintained a bonded warehouse.

On 22 September 1976, the Air Force Director of Logistics (LG) Staff was briefed by AFLC/ILC Commander (MI) that the cataloging feature would be implemented by October 1976, and that all other features would be implemented by

December 1976. By October 1976, the cataloging function had finally been approved by the Saudi Government and readied for final contractual action at a not-to-exceed (NTE) price of $731,844, and a November 1976 target implementation date. Although the cataloging feature was finally implemented in December of 1976, the four remaining functions which required approval and additional contract coverage for total NISS implementation--(configuration accounting, MDR, technical publications, and requisitioning/distribution) had not been approved (27). The work specifications for these four functions had been received from the contractor (Northrop) with a NTE price of $293,128, and, as of October of 1976, had still been in the United States awaiting approval.

During transitioning from the CONDEPOT to the NISS system, the nonstandard line items supported increased from 1200 to 15,000, the systems from 12 to 26 (11 of the 26 of which were highly complex), and the procedures from 3 vendor repair schedules to 11 repair contracts (4:2). The cost for services under CONDEPOT was established at $1,831,890, and the cost under the NISS was $12,317,748. Hardware procurement costed at $3,368,877 under CONDEPOT was estimated in July of 1977 to be $26,350,000 under NISS (for the initial two-year lay-in of support kits and costs of depot repair of nonstandard systems and items (38:14).

The tasks required for the transition were complex, and were identified as:

1. An expansion of the CONDEPOT contract, with a transfer of assets plan whereby Northrop no longer maintained a bonded warehouse, as noted; and the assets already in the United States were transferred to the Saudi Arabian bases for storage;

2. Negotiation of repair support contracts;

3. Implementation of a configuration accounting system;

4. Implementation of a printing and distribution activity for T.O.s; and

5. Maintenance of technical manuals, continued requisitioning and distribution activities, including procurement of replenishment spares, and continued repair support.

The transition between the two concepts had been scheduled over the time frame of 15 February 1976 (the end of PEACE HAWK III) through January 1977 (4:3), and finally around August of 1977, the four elements of NISS which had been only partially covered under CONDEPOT were implemented. After several letters between SA-ALC/PP and the Northrop Corporation, the contractor had agreed that these remaining services of configuration accounting, material deficiency reporting, technical publications, and requisition/distribution were covered under existing contracts (12).

Reasons for NISS Program Slippage. The following six significant factors were identified by AFLC/MIMS as having brought about the slippage of the target implementation date of NISS (or PACER GONDOLA) (30):

1. The magnitude of the project: nonstandard support had been resisted as the responsibility of the Air Force and AFLC since they first became involved in security assistance. AFLC's command policy was not to provide it; their systems were not programmed for it, nor did they have personnel familiar with or dedicated to it. Being specifically directed by the Military Assistance and Sales Manual (MASM, or AFR 400-3) to provide for a means of nonstandard support in each new weapon system case required the Command to initiate action, and their first approach was to only control and manage the case, relying on the contractor to perform the services. To do this, several interfacing AFLC systems had to be altered, procurement capabilities had to be upgraded, and program managers had to be trained and developed. Having no precedent, it took AFLC much longer than originally anticipated to acquire the requisite tools to manage nonstandard support (30:17).

2. The duplication of functions: each NISS proposal had to be matched to existing contractual requirements to insure that duplication of effort and cost were held to a minimum (30:18).

3. The fall out of Program Real Time Information System for Management (PRISM): the rejection of the in-country PRISM computer system resulted in the need to develop work-around procedures which diverted much management attention from the nonstandard project and contributed to the delay in its implementation (30:18).

4. The lack of a bilateral agreement: in the area of cataloging, the lack of a bilateral agreement prevented direct Northrop input of Saudi data into the DLSC system. The initial proposals required submission to AFLC, which would then forward the data to DLSC as Air Force data. The cataloging proposal had to be revised accordingly (30:19).

5. The requirement for in-country review: a delay was also imposed by Detachment 22 (SA-ALC detachment located in Dhahran, Saudi Arabia) on 14 September 1976, when they informed the PEACE HAWK Program Manager that in-country review of the Northrop proposal for services other than cataloging, would be required prior to contract signing (30:20).

6. The personnel turnover: a major share of AFLC personnel having detailed PACER GONDOLA background knowledge departed simultaneously and major reorganizations occurred at both the Air Logistics Center and Headquarters AFLC (30:20).

In conclusion, despite the fact the NISS functions had not been implemented according to original estimates,

Saudi Arabia did not suffer a lack of support for its non-standard items. The country was covered by the contract A400 through February 1979. It will be recalled that the contract F41608-76-C-A400 implemented the CONDEPOT system.

Final NISS Concept

By August 1977, the final NISS Concept had been developed and implemented (12). NISS was described as the vehicle for logistics support of material and services not available from DOD sources (although at the time it dealt with only the Saudi PEACE HAWK Programs). If an end item did not meet the following criteria it was not considered as nonstandard (32:72):

1. Not used on USAF aircraft,
2. Possesses a part number,
3. Requires national stock number assignment,
4. Not stocked in USAF depots,
5. Operation and maintenance not included in basic USAF T.O.s, and
6. USAF depots do not repair.

NISS support had been the outgrowth of the CONDEPOT support system and was providing supplies and services to the RSAF on a continuing basis. Most NISS functions were performed by the contractor in the Continental United States (CONUS), but spares were stored in-country by the RSAF. The principal differences between CONDEPOT and NISS

were that all NISS stocks were stored in-country, and that NSNs were assigned to nonstandard items.

All nonstandard equipment (which was realized in a total of 12 subsystems) was subject to the finalized NISS management processes. Northrop was performing the NISS inventory manager/system manager functions which had previously been handled by a USAF/ALC. NISS was responsible for the following management functions (32):

1. Requisitioning and distribution based on RSAF requisitions: the standard H051 system was used to process all RSAF requisitions. Requisitions for standard items were forwarded to the appropriate ALC or DLSA center for supply action and status reporting. The routing of NISS requisitions was similar, except that at Wright-Patterson AFB the requirement was transmitted to the NISS activity at Hawthorne for supply action through various vendors and for status reporting.

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RSAF------>H051-----(standard)--------> ALC or DSA Center
Depot      WPAFB----(nonstandard)-----> Hawthorne
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The activation of a card-to-tape machine at the RSAF depot permitted accelerated requisitioning, follow-up, and status processing. Depot requisitions were placed on tape at the RSAF depot and transmitted by TELEX to a similar unit at WPAFB. This transmission system provided an improvement in overall supply response for both FMS and NISS requirements;

2. Procurement and manufacturing functions, providing follow-on support for the spare items in the initial provisioning kits;

3. Cataloging data submission to DLSC for assignment of NSNs: cataloging of nonstandard items (assignment of a NSN) facilitated requisitioning and permitted maximum use of USAF assets. The following steps were involved in the assignment of a NSN to a part numbered item:

a. Northrop provided the required part number and item identification to DLSC;

b. DLSC reviewed the request and determined if there was an existing NSN or if a new NSN must be assigned;

c. If a new NSN was required, an "XX" suffix was assigned to indicate it was a SA-ALC FMS item with Northrop as a source of supply;

d. This information was provided to Northrop; and

e. Northrop cataloging then prepared an Electrical Accounting Machine (EAM) card input to SA/ALC for entry into the DOD supply system;

4. Overhauling/repairing/modifying provided by Northrop, or through vendors: those NISS items that required depot repair were returned by the RSAF to NISS at Hawthorne, California for repair or overhaul. When the RSAF depot NISS monitor identified an item for CONUS

repair, USAF Detachment 22 approval was obtained prior to release. Approved items were shipped by commercial air to NISS at Hawthorne for repair and return. Repair was performed in-house or by the vendor, and the item returned to Dhahran, Saudi Arabia;

5. Engineering and MDR analysis used to resolve technical problems, review of technical data, and support of the repair of nonstandard items: then, as now, Material deficiency reports identified unsatisfactory material conditions. MDRs on standard items were generated by maintenance when a deficient part was encountered. Reporting was through USAF channels and corrective action was the responsibility of the inventory manager. Frequently, the deficient part was returned as an exhibit. When evaluation and corrective action was taken, response was through the same channels. NISS MDRs were handled similarly with routing through the Air Force Plant Representative Office (AFPRO) to Hawthorne. Evaluation and corrective action was a Northrop responsibility;

6. Maintaining technical orders and Northrop technical manuals (NTMs) for RSAF F-5s and Saudi-peculiar equipment: the NISS T.O. effort in addition covered a requirement to maintain a listing identifying F-5B NTMs and a monthly status report reflecting F-5E/F revisions and related milestones. T.O. revisions were also a NISS responsibility and could be generated by the operational users,

by non-ECP (Engineering Change Proposal) engineering changes, by new provisioning data, or by changes in support policy. Technical Order Improvement Reports (AFTO Form 22) were used to report T.O. deficiencies. Reports covering standard equipment were handled through normal USAF channels. Reports covering NISS T.O.s flowed from the RSAF to USAF Detachment 22, through the AFPRO to Northrop for evaluation and action. Response followed the same routing in reverse order; and

7. Configuration status accounting accomplished at Hawthorne. Hawthorne produced and maintained baseline configuration status for each aircraft and selected equipment: configuration status reporting required both Hawthorne and in-country participation. Northrop prepared the Configuration Status Accounting Report (CSAR) which served as the baseline for each RSAF delivered aircraft and selected equipment, and the status of TCTO compliance was provided from in-country by the Contract Data Requirements List (DCRL) A02H.

Country Standard Item Support

Although the NISS concept was working well, in January of 1979 the Country Standard Item Support (CSIS) concept (Purchase Request Number: FD2050-79-65037, and USAF Contract Number F41608-79-0568) replaced the NISS procedures. The CSIS was basically the same as the NISS (9); its major

advantages being more responsibility transferred to the contractor along with the coverage of a greater number of nonstandard subsystems.

The CSIS contract identifies the support requirements for nonstandard systems installed in RSAF F-5 aircraft, and the associated support equipment; the effort includes: (1) the review, processing, and surveillance of spares and repair orders; (2) labor, hardware, facilities, and management for operation of nonstandard item overhaul and materials support; (3) secure warehousing for items awaiting overhaul and the depot support stock; and (4) related status, accountability, and reporting. The listed systems/subsystems/components in Figure 1 are those for which CSIS, formerly NISS, support is designated (although the USAF is authorized to add to/delete from this listing as the changing support situations warrant).

The CSIS includes those items of the NISS for nonstandard support and more. This concept covers the same inventory manager/system manager requirements as did the NISS; those of: requisitioning and distribution, follow-on support, cataloging, overhaul/repair/modification, MDR reporting engineering services, technical publications, and configuration status reporting (5).

Concept Changes Between NISS and CSIS. The requisition processing and distribution function has basically

Nonstandard Airborne Force Systems/Items

INS - LN 33 AN/ASN-117 *

Inflight Refueling (IFR) *

Arresting Hook (F-5B) *

Assisted Takeoff (ATO) *

Fuselage Inlet Doors (F-5B)

275 gallon IFR Tanks (Northrop Pacific tanks only) *

Basic "B" Structure Differences

Radar AN/APQ-159 (V)-1,-2 *

LCOSS AN/ASG-31 *

CDS/AN/ALE-40(V)-7,-8,-9 (Cockpit Controls and wiring only) *

14-62912 Maverick Interface Control Unit *

Flight Director Computer (FDC) CPU-129/A *

Laser Target Designator AN/AVQ-27 *

14-64916 Dual Flow Indicator *

14-64908 Cabin Pressure Altimeter *

Basic "E" Structure Differences

14-61909 RWR Blanking Electronics Unit *

"F" Peculiar INS Components

Basic "F" Structure Differences

Environmental Control System (Water Separator only) *

RECCE Nose *

Single Rail Launcher

NOTE: * indicates items originally supported through NISS.

Fig. 1. NISS/CSIS Supported Items (5:2-4)

Nonstandard Support Equipment

Automatic Test Equipment (ATE) Model E8205 *

- ATE Radar - 44 Adapters
- ATE IFF - 5 Adapters
- ATE ILS - 6 Adapters
- ATE FDC - 4 Adapters
- ATE BEU - 2 Adapters
- ATE CDS - 1 Adapter
- ATE Dogfight - 2 Adapters

Radar Test Set

- LCOSS Test Adapters
- LTDS Optical Simulator
- LTDS Test Set
- LTDS Servicing Kit

AGM-65 Handling Adapter

Launcher Test Cable breakout Adapter

IFF Interface Unit

FDC Test Set

Stray Voltage Test Set (CDS)

Dispenser Test Set (CDS)

CDS Adapter Kit

Fuel Flow Test Cable

Fuel Flow Scale Centering Gage

INS Test Station *

Ground Cooling Unit Adapter *

Fig. 1--Continued

not changed. The contractor is still not authorized to maintain inventory to meet the demands for nonstandard items (which was the major change between the CONDEPOT and NISS concepts), and requisitions are processed on a non-programmed basis and are lead time away.

Likewise, in the follow-on spares and configuration accounting functions, once again, there were virtually no changes between NISS and CSIS. Northrop still uses normal commercial contractor procedures to acquire and deliver spare parts requisitioned, but is required to establish an interface between contractor procedures and the H051/MIL-STRIP. Northrop is also still required to maintain a configuration status accounting system which includes a record of reports on nonstandard changes to the baseline F-5E/F configuration and related equipment belonging to Saudi Arabia.

As in NISS, the contractor submits all cataloging candidates to DLSC for screening by preparing and submitting the Identification Data (ID) documentation to DLSC (CDRL A029). Once screened and assigned a NSN by DLSC, the contractor generates/compiles the Catalog Management Data (CMD) on EAM cards, and enters the data into the SA/ALC D143C data system. The contractor must acquire ID data from vendors in sufficient detail for cataloging of each item scheduled for NSN assignment, and the CMD is updated as changes occur.

The Defense Logistics Agency (DLA) and AF negotiated agreement requires FMS nonstandard items to be subjected to a special item entry review prior to NSN assignment. This review is restricted to those items which are identified to Military/Federal Specifications and Standards assigned Federal Supply Code for Manufacturers (FSCM) 81348, 81349, and 96906. Prior to CSIS, FMS nonstandard items were not reviewed for a more preferred/alternate item within the Defense Supply Centers (DSCs) inventory. Review of items to be stock numbered is accomplished to assure that a preferred alternate with a NSN assigned does not already exist in DOD inventory.

The only nonstandard items the contractor considers as candidates for cataloging actions are: (1) the residual of the cataloging candidates identified during the period of performance of the PEACE HAWK Phase V contract (NISS), (2) those spares/repair parts and support equipment (SE) which become the object of an in-country requisition, and (3) those spare/repair parts and SE which become cataloging candidates as a result of engineering changes.

Nonstandard spares that are not considered as candidates are: (1) those items used only in the overhaul of depot level end items, and (2) those items with lack of usage history indicating future requisitions will not be generated.

Once again, as in the NISS concept, the contractor repairs or negotiates repair as applicable for nonstandard items with Source, Maintainability, Recoverability Codes (SMRs) which indicate partial or total depot repair. In certain instances, when the repair/overhaul of an item coded for Intermediate or Organizational level maintenance may exceed in-country capability, the situation is presented to a review by the in-country Not Reparable This Station (NRTS) Committee. If the review indicates the item requires CONUS Northrop or vendor repair, and Detachment 22 approves, it will be returned to Northrop with specific direction for repair on an exception basis despite the SMR coding.

RSAF assets are not stored in contractor CONUS facilities except for specifically authorized spares to support depot level overhaul/repair. This authority for storage of spares (or rotatables) is a major change between the two support concepts. It allows for a quicker turnaround time for reparables. The contractor maintains surveillance of reparable items and inventories of rotatable spares placed at the source of repair to expedite repair and return of the assets. The contractor thus must provide a CONUS secure space, bonded in accordance with AF regulations, to house support operations personnel and files, and materials being readied for shipment. The area is the

receiving point for reparables being returned from the RSAF depot and vendors' facilities.

The engineering and MDR analysis functions have changed as well. Northrop investigates material deficiencies reported by the RSAF, and they maintain all collected data. This data is not included in the USAF deficiency reporting system data bank. With exception of the F-5B aircraft, performance of actual investigative engineering requirements for RSAF nonstandard items is covered under the Sustaining Engineering portions of applicable Production Contracts. The overall Program Management administration of MDRs for the basic airplane and common systems is performed by SA/ALC; they receive MDRs, determine engineering cognizance, and assign responsibilities. For nonstandard systems purchased by the RSAF under contracts F33657-76-C-0001, F33657-75-C-0199, and F44657-76-C-0514 P00005, the function normally performed by SA/ALC was passed to the contractor under CSIS. MDRs may be initiated by RSAF, USAF, or in-country contractor personnel, and are initiated through Detachment 22. No investigation is started/conducted unless approved by the AFPRO/TM.

A data bank of RSAF material deficiencies is maintained by the contractor, and the contractor uses as guidelines for procedures for nonstandard item MDRs, T.O. 00-35D-54 (USAF Material Deficiency Reporting and Investigating Systems), AFR 66-3 (Product Improvement Program),

AFR 800-18 (Program Management of Systems Acquisitions for Foreign Military Sales), AFR 74-6 (Reporting of Quality Deficiencies), and AFLCR 66-15 (Product Performance).

The contractor continues to furnish NTMs (technical publications in support of RSAF F-5B aircraft) which satisfy specifications applicable to, and are the equivalent of, USAF Technical Orders. This requirement has not changed. Northrop is required to assure the technical accuracy of the data presented in the NTMs, and to review the AFTO Forms 22 and 847 (T.O. Improvement Reports, deficiencies/changes requiring approval). NTMs are maintained and distributed by Northrop in accordance with CDRL AOOS. A master file of NTMs is maintained by Northrop at Hawthorne, California. What has changed is the requirement to develop and follow procedures which assure that technical data supplied for this requirement is not entered into the USAF T.O. system.

The contractor also furnishes T.O.s to support the RSAF F-5E/F and assures the requirements are not duplicated on other contracts such as production or research and development efforts.

Changes and revisions to T.O.s are furnished on an as-required basis, and are prepared in the same style and format as the RSAF basic manuals furnished under the production contracts. Also, validation and verification in

accordance with T.O. 00-5-1 is the contractor's responsibility.

Estimate of CSIS

In conclusion, it is evident to the author only the minor changes mentioned in each of the functions above characterized the change in support requirements between the NISS and the CSIS. CSIS is currently in effect, and it is anticipated this concept will continue to be used for the Saudi programs. In a letter dated 17 January 1984, Col Markus K. Straume, then Deputy for CENTCOM Programs, stated the reason for the support of CSIS continuation. He stated:

> In December 1981, a two-year LOA was proposed to accomplish support of the nonstandard subsystems applicable to the RSAF F-5 aircraft. After negotiations with the RSAF, which included a briefing by AFLC/LSG/LCH personnel, a decision was reached to provide support from 16 February 1983 to 15 February 1984 via a sole source contract with Northrop and to provide support from 16 February 1984 using AFLC/MIB CMAL 79-1 procedures. Northrop nonstandard support has provided excellent support of the RSAF F-5 system; it is a proven system; it can be used to support critical RSAF needs on other weapons; the ALCs have been unable to negotiate pre-established contracts on all subsystems; and no evidence exists that support via CMAL 79-1 procedures will be less expensive than support by Northrop. For these reasons, we recommend the F-5 nonstandard support be continued as it is currently being accomplished. (42)

Although the Saudi Arabian PEACE HAWK Programs continued under CSIS, and did not use the newly developed CMAL 79-1, the CMAL provided policy for general nonstandard FMS cases and continues to do so. The CMAL was based on the

recommendations of the AFLC ad hoc committee discussed in Chapter II, and it, and the newly recommended regulation changes previously mentioned, is the subject of this next chapter, "Current and Projected Nonstandard Support Policy."

IV. Current and Projected Nonstandard Support Policy

This chapter will review the current policy on FMS nonstandard support, and identify the project changes to this policy. The current directive, the Controlled Multiple Address Letter (CMAL) No. 79-1--International Logistics Program (ILP), was ultimately derived from the AFLC Nonstandard Support Study Group mentioned in Chapter II. Because of this, a summarization of what occurred between the time the Study Group presented its recommendations to AFLC Chief of Staff, and the time CMAL 79-1 was published, will also be addressed.

The Development of CMAL 79-1

Nonstandard Support Study Group. As mentioned in Chapter III, the NISS procedures developed by SA/ALC (project PACER GONDOLA) were based on the Saudi Arabian PEACE HAWK Programs, and were meant to eventually be applied to all nonstandard support cases. The implementation of NISS to the Saudi Programs occurred later than initially planned, and because of the slippage of this PACER GONDOLA Program, AFLC established an AFLC Nonstandard Support Study Group, known as the "ad-hoc study group." This group was established to determine how the USAF should evaluate each

Foreign Military Sales (FMS) request, and to determine the optimum approach to support nonstandard configured systems. The Group presented its results and recommendations on 17 August 1976 to the AFLC Chief of Staff. The recommendations which were accepted included a usable and acceptable definition of what constituted a nonstandard item, and the following policy: that the support concept be determined independently for each nonstandard configured system. According to the Picard and Phalen thesis, manpower was allocated to accomplish the final evaluation and implement the tasks required.

In May of 1977, a message was sent to Headquarters (HQ) USAF from HQ AFLC stating that a formal policy was being developed on FMS nonstandard support, with issuance anticipated on 2 January 1978 (25). Let the reader note here that this policy was being developed by AFLC and not SA/ALC (which had developed the NISS policy).

CMAL 78-5. On 17-19 January 1978, an all-ALC conference was held by AFLC to discuss and finalize a recommended approach for nonstandard policy (24:3). At the conclusion of the conference all had agreed that (24:25): (1) AFLC was responsible to provide the best logistics support at the least cost to the FMS customer; (2) contractual control and surveillance for some support functions have greater impact than simply organic accomplishment; (3) a

nonstandard support concept using both organic and contractual support would have the least impact on AFLC; (4) the SM/EAIM relationship would be more harmonious and effective under the combination (organic and contractual) concept; and (5) a follow-on nonstandard support concept had to be determined prior to offering support to the FMS customer. A recommendation was made that the conclusions reached should be addressed in a CMAL (78-5) and implemented 1 May 1978. HQ USAF was briefed by HQ AFLC in April of 1978 on the newly developed concept for logistics support for nonstandard items/configurations (11). This author is surmising the concept was an outgrowth of that originally presented by the previously-mentioned 1976 AFLC ad hoc group. HQ USAF approved the Nonstandard Item Support (NSIS) concept presented, and the procedures were identified as CMAL 78-5.

CMAL 78-5 was not mandatorily retroactive, and it pertained "to the support of items or configurations sold through FMS cases and which USAF has contractually (LOA) agreed to support" (11:11). Its objectives were: (1) to provide rapid supply and depot level maintenance for nonstandard items; (2) to minimize the FMS customers' logistics costs; and (3) to minimize the impact of nonstandard programs on AFLC manpower. The objectives were to be met by: (1) prearranging contracts; (2) negotiating contracts with subsystem vendors; and (3) letting contracts for spare

parts procurements, depot level maintenance, T.O. verification and validation, and technical services.

According to CMAL 78-5, to support a system sale, a separate case for nonstandard initial spares would be required listing all nonstandard subsystems, and the procedures required for the country to obtain nonstandard support would be similar to those requesting regular FMS cases. A request for Price and Availability/Letter of Offer and Acceptance (P&A/LOA) would be sent to ILC, which in turn, would forward the request to the ALC System Manager. The System Manager then would contact the System Program Office to determine nonstandard applicability, and subsequently submit impact information and a recommended method of support to HQ AFLC. AFLC would evaluate the recommendations and develop the nonstandard case. The P&A/LOA would then finally be forwarded to the FMS customer who would either accept or reject the case. If accepted, AFLC would then issue a case directive.

This CMAL (78-5) was to have been approved and implemented by October 1978 (11:14).

CMAL 79-1. Between April 1978 and June 1979, CMAL 78-5 went through 5 revisions (9), and on 28 June 1979, it was finally published as CMAL 79-1. This CMAL was to expire after incorporation into AFLC Supplement #1 to AFR 400-3, or one year after the signature date, unless it was formally extended. It has been extended through 1985.

When published, the CMAL was retroactive except when adherence would result in noncompliance with an existing contract for a Foreign Military Sales follow-on support program (37:N6). This policy also directed AFLC activities to expend more effort in reducing the FMS customers' logistics costs of nonstandard item ownership, which in turn, affected a change from the usual 3 percent administrative charge to a 5 percent administrative fee. Although the additional 2 percent was added to cover AFLC's additional costs, there was an anticipated total cost reduction in the long term for the involved country.

CMAL 79-1 Policy

CMAL 79-1 defined a nonstandard article as one "with or without a National Stock Number (NSN), which DOD does not actively manage for its own use," and has for its purpose the providing of guidance:

> . . . to be used by AFLC activities in developing, implementing, and managing weapon system sales and attendant follow-on logistics support programs, which contain items or configurations not used by a DOD components. (23:1)

It discusses the general concept for support of nonstandard items, and covers: (1) the P&A studies and FMS case establishment for system sales and follow-on support; (2) definitization; (3) provisioning; (4) cataloging; (5) T.O.s; (6) engineering and technical services; (7) follow-on support item supply; (8) depot repair; (9) configuration

accounting; and (10) system activation manpower funding. Each of these subjects will now be briefly explained so the policy changes currently taking place can be later identified (23).

General Concept. The USAF is obligated to provide follow-on logistics support for all nonstandard items/ configurations which have been sold through USAF FMS programs except when the item has been modified by the purchaser, when nonsupport is specified in the LOA, and when the item was procured by a country from non-DOD sources.

FMS purchasers are encouraged to purchase weapons systems which contain items and configurations used by the DOD. Because not every item in the DOD inventory is releasable for FMS, releasable commercial items may be substituted. FMS customers may also specify inclusion of items, subsystems, or configurations which are not used by the DOD, into USAF managed systems.

In selecting nonstandard items for inclusion in a future system sale, the FMS customer must indicate on the LOA whether he desires future follow-on support through the FMS program, or whether he will deal directly with contractors for follow-on support. This decision by the customer impacts upon the planning and requirements for contractor data necessary to establish a follow-on support program involving competitive vendor contracts. The initial

and follow-on logistics support programs will be designed and managed by USAF/AFLC, in conjunction with the procuring activity, usually AFSC. The support programs will then be accomplished through contracts let by the System Management ALC and End Article Item Management (EAIM) ALC.

When USAF support is selected by the FMS customer, AFLC uses competitive contracts with subsystem/end article vendors, or other commercial sources, to avoid prime contractor charges for administration and overhead. These contracts will provide for spare part procurements, depot level maintenance, T.O. updates, and technical and engineering services.

P&A Studies and Case Establishment for System Sales. "The P&A study is prepared in response to a Letter of Request (LOR) for material or services submitted by an FMS purchaser" (23:6). AFSC and AFLC provide the pricing information for nonstandard items and configurations contained in the sale.

Initial spares for a system will usually be provided by two FMS cases, one for standard spares, and one for nonstandard spares. The exact cost of the support is not known because exact configurations of nonstandard articles are not known at the time of P&A preparation. Even so, a case value (total cost estimate) will be assigned, and subsequently amended when the exact

requirements (configurations) are defined. A 5 percent administrative charge (instead of the 3 percent charged for nonstandard systems) will be assessed on the nonstandard spares case.

Usually, a separate case for data and documentation processing will be established. The SM and EAIM will provide a price estimate of the contractor data and AFLC technical effort necessary to accomplish economical initial and follow-on support. The data needed for the case pertains to the functions of provisioning, screening (for interchangeability and substitutability), cataloging, reprocuring, and repairing.

If the SM or EAIM anticipates extended use of an item, configuration accounting and its associated cost will be included in the P&A and LOA, and will usually be discussed during the Definitization Conference.

P&A Studies and Case Establishment for Follow-on Support. P&A studies and subsequent LOAs for nonstandard item follow-on support will, except for cataloging and training, be designated separately from FMS cases which provide logistics support for standard items. AFLC will support the follow-on requirements by one of two methods. The first method is prearranged support contracts by EAIM and subsystem ALCs, and it is preferred because it can reduce delivery lead times. The second method is

nonstandard item support on a "firm order" basis; that is, the purchaser periodically consolidates requirements and orders its spares via a firm order nonstandard spares case. This method is used upon contractor refusal to bid, or upon EAIM recommendation to the ILC Case Management Activity. It is noted the USAF does not stock, store, or issue, "but rather acts as a manufacturing broker" (23:12).

Follow-on nonstandard spares is usually provided under a "blanket order nonstandard spares" case; the rules of establishment of which are the same as those required for a standard blanket order spares case. Additional information, though, is required for AFLC to establish the necessary commercial contracts. The purchaser may be asked to specify a range of nonstandard items for which they desire contractual coverage. They are not required to commit themselves to buy a specific quantity of each line item in the range; the range is requested to assist AFLC in arranging supply contracts and estimating case price.

Depot level repair of nonstandard recoverables and equipment may be provided through FMS cases, and blanket order and/or firm order cases which specify "repair and return" should be used. "The 'repair and return' procedures for standard and nonstandard items are identical" (23:13).

T.O.s which pertain to the nonstandard items/configurations are known as country standard T.O.s (CSTOs),

and will not be priced at standard USAF prices. The updating process will be a joint effort between AFLC personnel and various contractors.

CMAL 79-1 requires cataloging of all nonstandard items supported through USAF FMS programs. A service's case should be established with every FMS purchaser who wishes USAF cataloging services.

Definitization. A Definitization Conference precisely defines and tailors the purchaser's program by reviewing the site survey and documenting the country's desires. It establishes a firm system configuration, discusses all ill-defined line items on the LOA, and establishes the range and depth of standard spares and support equipment desired for initial delivery. The Conference is chaired by the ALC System or Program Manager, and is convened normally within 60 days after the signature of an LOA for a system sale.

Provisioning and Cataloging. Provisioning is accomplished in accordance with (IAW) AFLCR 65-5, Air Force Provisioning Policies and Procedures, and use the standards set by MIL-STD-1552 and 1561. The AFLC Provisioning System (D220) will be used when available, and in addition to the guidance contained in the above Provisioning Regulation, the following two additional stipulations apply: (1) the ALC will send, or require the contractor to send,

a copy of the engineering data to Battle Creek, Michigan (AFLC/Cataloging and Standardization Office (CASO)) to be used for preparing the item identification and NSN assignment; and (2) local control stock numbers (NDs) will be applied to nonstandard items to initiate procurement action, should action be required before the NSNs are available. FMS unique Material Management Aggregation Codes (MMACs), which identify the responsible ALC, will be cited in the ND numbers.

Battle Creek, upon receipt of ALC data, extracts the items related to specifications and standards which are the responsibility of the Defense Supply Centers (DSCs), and forwards them to the appropriate DSC for item entry control review. Items passing the review are appropriately identified, registered, and assigned an NSN. Upon receipt of the NSN, ALC inputs the applicable catalog management data into the Master Item Identification Control System (D043), and insures all related systems records are adjusted from the ND to the NSN.

Technical Orders. The data requirements applicable to nonstandard support are identified by the Systems Management and EAIM ALC in accordance with (IAW) the country maintenance concept, and support agreements as provided by the SPO and ILC Case Management Activity. Normally, a system procurement contract will include updates of CSTOs

and baseline T.O.s until 90 days after the last system is delivered. Thereafter, the SM and/or EAIM ALC is responsible for providing T.O. updates via contract (23:20). The contractor is responsible for validating T.O.s IAW AFR 8-2 (Air Force Technical Order System) and TO 00-5-1 (Air Force Technical Order Manual).

CSTO verification is a test of usability and accuracy, and the degree and extent of verification are established by a technical publications planning conference, or by the Technical Order Management Agency (TOMA).

The contractor analyzes, evaluates, and approves or disapproves T.O. Improvement Reports, and incorporates the necessary changes into the appropriate CSTOs. The contractor also determines the required T.O. stock levels, and prints, stocks, monitors, controls, and accomplishes the distribution of all CSTOs. Country Standard Time Compliance Technical Orders (TCTOs) are also the responsibility of the contractor. Interim T.O. supplements or TCTOs are electronically transmitted by the U.S. Government inspection activity at the contractor's facility, to the country and all other concerned activities.

Engineering and Technical Services. These services include:

1. Engineering Change Proposal (ECP) evaluation,
2. Technical data evaluation,

3. Aircraft Structural Integrity Program (ASIP),

4. Component Improvement Program (CIP), and

5. Advisor functions.

All the above are accomplished optionally (organically or contractually), depending on the impact on manpower, capability, configuration similarity (to USAF items), and complexity.

Follow-on Support Item Supply. Procurement is accomplished through an order against a Basic Ordering Agreement, an Indefinite Quantity Contract, or a Requirements Contract covering the system/item. These contracts allow the country to add additional requirements. (NOTE: see Glossary for definitions of contracts.)

Depot Repair and Configuration Accounting. Depot repair is accomplished contractually, and configuration accounting is an option which may be requested by the purchaser. The exact nature of the accounting is determined by the USAF, the FMS purchaser, and the prime contractor when the baseline configuration is established (23:24).

System Activation Manpower Funding. An FMS case is used to fund temporary duty assignments (TDYs), and salaries of resident employees involved in definitization, provisioning, and cataloging.

All the above functions identified in CMAL 79-1 were to have been incorporated into the applicable regulations. These functions were not incorporated, and the CMAL was, instead, extended through 1985. It continues to provide the general procedures for nonstandard support. Because, however, the growth of nonstandard support requirements has continued almost exponentially, the support concept has been continually changing to meet the changing needs of the countries and the ALCs who support them. These NSIS concept changes will be presented in this next section.

The Continuing Evolution of NSIS

CMAL 82-1. CMAL 79-1 is currently the basis for logistical support of nonstandard items. Because it was extended annually and not incorporated into the applicable regulations, because it was general in nature, and because the number of nonstandard support cases continued to increase, in March of 1982, a new CMAL 82-1, was proposed and developed by ILC/XRX (Directorate of Plans and Policies). The proposed CMAL was formatted to show which permanent regulation would incorporate its contents, and it covered and expanded upon the same support functions as 79-1. CMAL 82-1 was sent to the ALCs for comments and recommendations; but, ultimately, was not implemented.

NSIS Study Group. In May of 1984, the ILC reviewed its Nonstandard Item Support (NSIS) program (CMAL 79-1), and three initiatives were developed to improve the support provided (19). First, a detailed procedure for processing part number requisitions was developed. Second, a recommendation that the Customer Generated Nonstandard Requisition Guide which had been prepared to assist Turkey be distributed to all FMS customer countries. This guide had been developed by the Turkish Case Manager, Paula J. Lockhart (12). Third, an NSIS Study Group was formed with representatives from HQ AFLC, ILC, and CASC. This Group was to review recommendations from the five Air Logistics Centers regarding improvements to the NSIS program (19). The first initiative was realized upon implementation in July 1984. The part number requisition procedures were forwarded to ILC/XRXI (under the Director of Plans and Policies (XRX)) for inclusion in the next revision of AFM 67-1 (estimated for January 1985). The second, the nonstandard requisition guide was available for all FMS customers in September 1984. The third, the NSIS Study Group, met on 15 August 1984 and discussed ALC recommendations. The suggestions included the elimination of the term "nonstandard" and the centralization of NSIS at ILC; both of which were not accepted.

From 10 through 12 October 1984, another NSIS Study Group conference was held. Once again a suggestion was

offered, and this time accepted, that the term "nonstandard" be eliminated. The term had not only developed a bad connotation with both FMS customers and the USAF, but had different meanings outside of FMS, especially within the DOD cataloging and standardization community. It was agreed that all items previously referred to as "nonstandard" would instead be termed "FMS nonstocked." The word "nonstocked" was agreed upon mainly because in practice, the USAF does not stock, store, or issue items unique to FMS countries (29).

In addition to acceptance of the above recommendation, the following action items were provided to the appropriate agencies by the NSIS Study Group to be worked and implemented (29):

1. To use standard, rather than unique, Source of Supply (SOS) codes (involved in cataloging);

2. To determine an appropriate charge to be included in the cost of a part number requisition to cover the average ILC and ALC manhours expended to process the requirement;

3. To initiate action to obtain HQ USAF approval to supply FMS nonstocked items at the standard 3 percent administrative surcharge, and approval to add a standard fee to the cost of a part number requisition;

4. To revise part number requisition processing procedures in AFM 67-1; and

5. To develop and coordinate an AFLC policy statement for support of FMS nonstocked items to be forwarded for inclusion in AFR 400-3.

These above items, along with the previously-mentioned CMAL 82-1, prompted changes to nonstandard support directives. The policy and procedural changes were drafted by ILC/XRP (Directorate of Program Control), and forwarded in May 1985 to the affected agencies for action. They will incorporate both the CMAL 79-1, and the action items of the October 1984 NSIS Study Group, into the appropriate regulations. Once these changes are incorporated into the regulations, the CMAL 79-1 will no longer be the policy; the CMAL will be deleted. These changes will be covered in this next section, Projected Changes.

Projected Changes from 1984 NSIS Study Group and May 1985 Draft Policy. The draft changes affect four regulations, DOD 5105.38-M, AFR 400-3, AFM 67-1, and ILCR 400-77. It should be noted that although AFLCR 72-2 was not addressed in the draft changes, it was addressed in the CMAL 82-1 as requiring a change. These changes have been drafted by AFLC/Cataloging and Standardization Center (CASC) as of 30 April 1985, and have an estimated publication date of November 1985. This is important, for prior to the AFLC/CASC draft, AFLCR 72-2, the regulation on Cataloging and Standardization did not contain information

dealing specifically with nonstandard items. This change will add an entire chapter on Foreign Military Sales, which will include specific guidance on nonstandard items.

For ease of presentation, the draft changes will be presented in the same sequence as the action items addressed during the October 1985 NISS Study Group conference.

1. (Draft DOD 5105.38-M and AFR 400-3). The term "nonstocked" was not accepted. The term "nonstandard" remains, and is now defined as

> . . . an item (with or without a National Stock Number) which the DOD does not actively manage for its own use. Because they are not actively managed, DOD does not stock, store, or issue nonstandard items from its inventories.

2. (Action Item #1/Draft AFLCR 72-2). The SOS codes in the cataloging system were changed to use the standard SOS codes.

3. (Action Items #2 and #3). The question of administrative surcharge has been volatile since the publication of CMAL 79-1. In March 1981, AFLC requested that the Security Assistance Accounting Center (SAAC) remove the requirement for separate nonstandard item and equipment cases, and create a method to assess 3, 5, or any other percent surcharge on a document-by-document basis. They argued that "the time and effort associated with isolating nonstandard items is clearly difficult for many of our (FMS) customers" (36). They also stated their proposal would

"not only simplify our customers' internal procedures, but also reduce AFLC's costs associated with FMS case establishment" (36). The request was denied.

In October 1984, AFLC again approached the subject, and in December a request was sent to HQ USAF for approval to process all nonstandard item deliveries at the standard 3 percent administrative surcharge rate. They stated:

> Current AFLC policy is to prepare separate FMS cases with an "N" in the second position of the appropriate case designator for nonstandard support spares, equipment, etc. Unfortunately, many of our FMS customers find this difficult to deal with because of the time and effort associated with isolating nonstandard items for processing against separate cases. Consequently, we have been forced from both a political and practical standpoint to allow FMS customers to process nonstandard items on standard cases--especially those countries with small annual requirements. . . . DOD guidance currently allows for application of a lesser percentage (but not less than three) on an exception basis.
>
> In order to provide more convenient service, we had asked SAAC and AFAFC to develop a method to apply the 5% surcharge on an item-by-item basis instead of by case thereby eliminating the need for separate nonstandard support cases. They declined to do so.
>
> We believe we have ample justification for a 3% administrative surcharge for nonstandard items . . . (a) this will eliminate the need for separate nonstandard support cases . . . and implementation will not only simplify our FMS customer's internal procedures, but also reduce AFLC's costs associated with FMS case establishment; (b) We have adopted the practice of cataloging nonstandard items using descriptive item identification . . . this should eliminate much of the special handling for nonstandard stock numbered items. . . . In addition, the FMS country pays to have their items cataloged - this charge is applied either to a separate FMS case for cataloging services or to the case on which the material was ordered.
>
> In our effort to align FMS nonstandard support as closely as we can with support provided for standard

> items, we believe that approval to apply a three percent administrative surcharge will be a major step toward both improving and simplifying that support. (7)

On 30 April 1985, the request was disapproved. The justification for this decision was that,

> . . . while para 70502B, DOD 7290.3-M does allow for reduction of the surcharge when approved by the Director, DSAA, any "blanket" justification for AFLC would have to be based on specific types of cases or lines. (44)

"Management of nonstandard items," HQ USAF continued, "varies between services and between commands. We do not have adequate justification for proposing this change for all programs" (44). In May of 1985, AFLC responded stating they would take corrective action to align their procedures with DOD and USAF policy by authorizing requisitioning of nonstandard items only on nonstandard FMS cases (6). The final AFLC policy sent to the Deputies for the EUCOM/NATO, PACOM/SOUTHCOM, and CENTCOM Programs stated that:

> NSIS will be provided only on separate FMS cases/lines from standard support. In the interim, nonstandard items for countries which do not have an established NSIS case may be processed on standard support cases . . . on a case-by-case basis. If after a reasonable period of time (six months is reasonable), the country has not received a written waiver to this policy from higher headquarters or will not establish appropriate NSIS cases, NSIS should be terminated on standard support cases and the country advised to obtain NSIS directly from commercial sources. (28)

4. (Action Item #4/Draft AFM 67-1). New and more specific part number requisition procedures have been drafted for implementation into AFM 67-1. The change

identifies specific actions to be taken by the ALCs, ILC, and FMS customer.

5. (Action Item #5/Draft AFR 400-3). An AFLC policy statement for support of FMS nonstocked items was drafted and forwarded for inclusion in AFR 400-3. A new paragraph, 2-20, "Logistics Support of Nonstandard Items," will be added. This paragraph addresses the general purpose, scope, and definition of NSIS.

The AFLC policy statement was not the only change to AFR 400-3. The following changes were also drafted for submission into the regulation to clarify some fine points on nonstandard system support:

a. Paragraph (para) 6-6 will add a section on "P&A Studies, and FMS Case Establishment for Follow-on Support of Nonstandard Items";

b. para 7-16 will include a "General Support Concept for Nonstandard Items Contained in System Sales";

c. para 7-17 will address "P&A Studies, and FMS Case Establishment for System Sales Containing Nonstandard Items";

d. para 8-7 will add a section on cataloging actions for nonstandard items;

e. para 8-12 will add a section on depot level repair of nonstandard recoverables and equipment;

f. para 8-14 will add a section on T.O. updates and revisions for nonstandard items;

g. para 8-15 will add a section dedicated to methods of nonstandard item support; and finally,

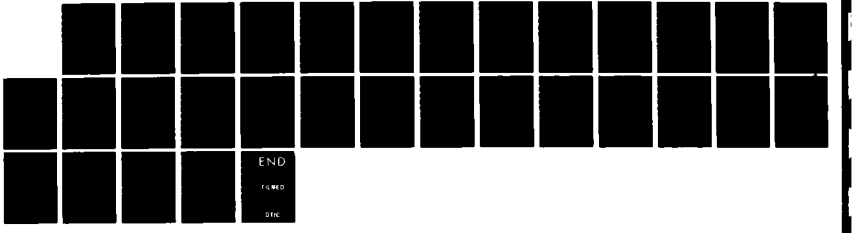
h. para 10-4 will add a statement dealing with follow-on nonstandard support cases for contractual services.

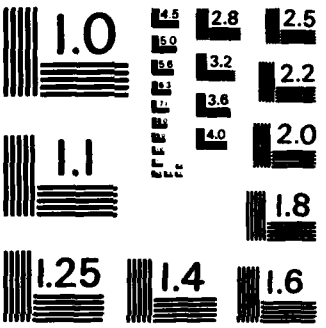
All the above changes were identified as action items during the October 1984 NSIS Study Group meeting. In addition, changes were drafted and implemented for both ILCR 400-77, Case Manager's Guide, and AFLCR 65-5, Air Force Provisioning Policies and Procedures. These changes will be identified next, for it is important to address all progression towards standardized procedures for nonstandard support.

The changes to ILCR 400-77, once implemented, delete CMAL 79-1 as a regulation defined as affecting nonstandard support. In addition, the changes address: (1) the addition of defined and blanket order case designators; (2) the requirement for a separate subline for nonstandard item maintenance; (3) the addition of a case identifier for follow-on support cataloging and provisioning; and (4) the deletion of the requirement to identify the correct standard case when an item has an NSN without a nonstandard/material management code (MMC).

An interim change to AFLCR 65-5 prepared by the AFLC Provisioning Office (9), was affected around June of 1984. Titled "International Logistics Program (ILP)

AD-A161 571 NONSTANDARD SUPPORT IN USAF MANAGED SECURITY ASSISTANCE 2/2
PROGRAMS: POLICIE.. (U) AIR FORCE INST OF TECH
WRIGHT-PATTERSON AFB OH SCHOOL OF SYST..
UNCLASSIFIED K L MCLAUGHLIN SEP 85 AFIT/GLM/LSM/85S-48 F/G 15/3 NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS - 1963 - A

"Provisioning," it addressed specifically nonstandard items, and the requirement that they be identified in the LOA. It identified also the stocklisting requirement, and the requisitioning procedures (20). The change, in addition, made the acquisition of cataloging data optional for the FMS customer. It is not optional in the CMAL 79-1. As of July 1985, the inconsistency has yet to be rectified (9).

Additional Changes. Two programs are planned for implementation by the International Logistics Center which will directly impact nonstandard support. These are the Consolidated Procurement Cycle and the Contractor Logistics Support for Out-of-Inventory Weapon Systems Programs.

The Consolidated Procurement Cycle Program will be applied to nonstocked NSN items used only by FMS customers. The ILC's Security Assistance Management Information System (SAMIS) will hold low-priority requisitions for affected items until dates determined by the last numeral of the NSN. NSNs consist of 13 numerals, the last 7 of which are sequentially assigned. What this Program means is that SAMIS will release to ALCs, FMS requisitions which end in the numeral "1" during January of each year, release those which end in the numeral "2" during February, etc. High priority and upgraded requisitions will be passed to the ALCs for immediate procurement. These procedures will ensure each ALC will receive a steady flow of preconsolidated FMS

requisition requirements, and will thus benefit both the ALCs and the FMS customers (8).

The Contractor Logistics Support for Out-of-Inventory Weapon Systems Program applies to the supply and repair of items applicable

> . . . solely to weapon systems no longer used by the DOD but which are provided to foreign governments through USAF Security Assistance programs. This program would transfer system program management, inventory management, and procurement responsibilities from ALCs to contractors. Support of 2500-3000 aircraft could be affected. (8)

Conclusion

The intent of this chapter was to acquaint the reader with the current efforts directed toward improving USAF management of nonstandard item support cases. We have addressed the current policies, and the projected changes to them. As FMS nonstandard support requirements changed and increased in scope, so did the procedures and directives. The 1979 CMAL is still in effect, but its specifics are being expanded, clarified, and incorporated into the applicable regulations. New and innovative programs are in the process of being implemented, and interest in nonstandard support is being rekindled "because the increase in workload is straining available AFLC manpower" (9).

V. Conclusions and Recommendations

This final chapter will address the research questions proposed in Chapter I of this thesis. It will, in addition, present the recommendations of the author.

Research Questions Answered

1. Why does the Air Force provide nonstandard item support and what type of support have they been required to furnish? The USAF provides nonstandard item support for much the same reasons it provides FMS support, and these reasons have not changed since the Picard and Phalen thesis of 1977. Generally, FMS supports specific U.S. foreign policy and security objectives and, historically, these sales have:

> . . . improved internal order and increased the prospects for regional stability, thereby reducing the likelihood of direct U.S. military involvement. . . . Additional benefits stemming from foreign military sales are: the U.S. production base is maintained, U.S. employment is increased, research and development costs are spread, unit costs to the U.S. Services are reduced, and forward materiel support is facilitated. (16:6-1)

Specifically, nonstandard system purchases may be encouraged by the U.S. Government for a variety of reasons including: (1) the U.S. wanting a country to have a certain capability; (2) the desire to improve the maintenance capability of a country; (3) the benefit derived from the

country's experience with the item; (4) the ability to use the nonstandard system as a political lever; and (5) the need to stimulate the U.S. economy. The FMS customer, on the other hand, has reasons which may or may not coincide with the U.S. Government's. These may include: (1) "national pride in owning a unique system" (34:126); (2) the country's need for internal standardization; (3) the country's inability to procure a standard system; and (4) the country's perception that a standard item may not meet its particular needs.

Once the nonstandard systems are sold, the USAF accepts a responsibility to provide support throughout its active life. This support includes provisioning and cataloging services, technical order management, engineering and technical services, follow-on support item supply, depot repair, and configuration accounting. "Regardless of whether a system is standard or nonstandard, the customer is purchasing a system support package" (34:126) when she purchases a system; and items of nonstandard support will be carried in the logistics system long after the system in the foreign inventories has become obsolete by U.S. standards.

2. How were nonstandard support items dealt with prior to and during 1977? Nonstandard support items were dealt with on a case-by-case basis. Virtually no policies were available for guidance, and the trend toward FMS

nonstandard sales was skyrocketing. An attempt was being made to provide such direction, using the Saudi Arabian PEACE HAWK program as a trial case. If acceptable and usable, these procedures developed for the Saudi Program were to be applied to all other nonstandard cases. The procedures, termed Nonstandard Item System Support (NISS), were effective for the PEACE HAWK Program, but were not applied to the other nonstandard cases. NISS, in fact, evolved into the Country Standard Item Support (CSIS) Program currently in use by the Saudis.

3. How and why have policies changed since then? Since the 1977 Thesis, an AFLC Controlled Multiple Address Letter (CMAL) 79-1 has been developed. This CMAL is currently in effect and provides general guidelines for those functions of nonstandard support required by the FMS customer. Because the numbers of nonstandard systems supported have increased dramatically, and the technology has likewise advanced, the 1979 CMAL is no longer in of itself sufficient guidance on the nonstandard issue. A letter developed by the AFLC ILC Plans and Policy office was put out in May 1985, and is in the process of being implemented. This letter provides draft changes to the regulations DOD 5105.38-M, AFR 400-3, AFM 67-1, and ILCR 400-77. These changes clarify, define, and expand nonstandard support concepts, and incorporate those items of CMAL 79-1 which are still valid.

In addition, a draft change to AFLCR 72-2 has been circulated which will add an entire chapter on FMS, and specifically address nonstandard support.

The AFLC has made much progress toward defining and elaborating upon their nonstandard support concept. In addition to the much needed regulation changes, two new programs have been developed which will streamline the nonstandard support process: the Consolidated Procurement Cycle Program, and the Contractor Logistics Support for Out-of-Inventory Weapon Systems Program. Interest in the nonstandard support problem has been rekindled, and actions are being taken to make the support concept acceptable and workable.

4. Is support of nonstandard items projected to continue? Yes, support is projected to continue. In fact, more countries are requesting nonstandard systems/subsystems than ever before. Just one example of how this support has increased can be seen in the Saudi Arabia PEACE HAWK program. From 1971, PEACE HAWK I, through 1976, PEACE HAWK III, 12 nonstandard subsystems were identified for support. With PEACE HAWK V, 26 were identified, and the current Phase IX, identifies 53 such subsystems, with many additions anticipated. Nonstandard support requirements are growing, and the accompanying guidance is being changed to accommodate this growth.

The reader should bear in mind that although the USAF is required to support nonstandard FMS purchases, it is also USAF policy to

> . . . attempt to minimize the sale of nonstandard articles, . . . [for it] recognizes the advantages associated with system standardization in both the areas of logistics and operations. (23:1)

Conclusions

1. The USAF has formulated a nonstandard support policy and is in the process of formalizing it by inclusion in appropriate DOD and Air Force regulations. The policy is broad enough to allow required flexibility in dealing with each unique nonstandard case, yet appropriately supportive in defining the case's requirements.

When the Picard and Phalen Thesis was published, nonstandard policy was in its infancy. Although the nonstandard FMS sales have increased, and are continuing to do so, a definitive policy is now taking hold. The Air Force Logistics Command is recognizing the magnitude of the nonstandard support requirement, and is headed in a firm, straight-line direction. There are still problems, such as the interim change to AFLCR 65-5 not coinciding with the CMAL 79-1, but those are being ironed out, and with firm leadership and determination, the nonstandard support concepts will come in line with the multitude of changes which have occurred in nonstandard support. A

direction is now being provided to those who must deal with this type of support on a daily basis.

2. Sales of nonstandard systems/subsystems/items are continuing to increase, and the U.S. Air Force, as in the past, will be directed to continue their support.

The Air Force is not the only service required to support nonstandard FMS cases; the Army and Navy too are involved. The nonstandard support requirements have become so vast that a tri-service team is being established to study DOD support of obsolete and nonstandard items. Because of the Air Force's vast experience, AFLC will chair the study group whose consolidated recommendations will be forwarded to Lt Gen Philip C. Gast, Director of the Defense Security Assistance Agency. The recommendations will have far-reaching effects, for all three services (13; 18; 26; 41).

3. Years have passed since the 1977 Thesis, and policy is just now being incorporated into the applicable regulations, formalizing it. The major reason for the time lag has been the reorganization of AFLC, including the establishment of the ILC in 1978, and the transferral of key personnel.

4. There does not appear to be a major effort by the USAF to reject or discourage FMS customer requests for nonstandard systems/subsystems. In fact, during the October 1984 Nonstandard Item Support Study Group

Conference, a suggestion was offered to change the term "nonstandard" to "nonstocked." One of the main reasons cited for the recommendation was the bad connotation the term had developed with FMS customers.

5. Many of the conclusions drawn by Phalen and Picard are still valid. The sales of nonstandard items continues to increase. There is very little identifiable effort to discourage FMS customer requests for nonstandard items. There appears to be no evidence that the additional workload generated by nonstandard item support is considered when the USAF is directed to provide the support. An example is the request that nonstandard cases be aligned with standard cases by using the standard 3 percent administrative surcharge, and by having SAAC and AFAFC develop a method to apply the 5 percent surcharge on an item-by-item basis rather than by case. The recommendation was designed to simplify and improve the support effort. The request was denied.

What has changed is:

a. The USAF has succeeded in its attempt to formulate a nonstandard support policy. Although it is still in the implementation stage, it is indeed a step in the right direction;

b. The disparity in the handling of nonstandard support concepts is being erased through the establishment of firm nonstandard support policies. Air Force

has passed through its infancy stage, and is in its adolescent realization phase. Once the policies are implemented, standardization of nonstandard support will become a reality;

c. The lack of coordination between AFSC and AFLC mentioned in the 1977 Thesis could be neither confirmed nor denied through this research effort. What could be determined from the various interviews, however, was the lack of cooperation among the ALCs and the lack of available and useful information among the ALCs and their Headquarters. Once the nonstandard policies are integrated into the regulations, and implemented, much of this should cease.

Recommendations

Much action has been taken to define and solidify the USAF nonstandard support concept. AFLC is taking positive actions to correct past deficiencies, and the trend is toward the Command continuing to emphasize the importance of nonstandard support.

When these policies and programs have been implemented, after a suitable period of time has passed, the impact of these changes, and their benefits and deficiencies must be researched and evaluated. Only the historian can judge, and the impact of what is currently taking place cannot be assessed at this time. It can only be guessed at.

In order to learn from our past actions, a follow-up study is called for. Then, and only then, can these new policies and procedures be judged, and additional corrective actions taken.

AFLC must continue to take action to correct discrepancies between and among directives. All regulations must point toward the same end product, cooperation and mission accomplishment. Although much has been done, the changes to the policies and procedures, and the new programs must be continually monitored from within the Command to insure the paths taken by the actions are all in the same direction.

AFLC should also consider again pursuing the question of having SAAC and AFAFC develop a method to apply a 5 percent administrative surcharge on an item-by-item basis rather than the current case-by-case basis. It is reasonable to standardize. Whether the standardization consist of aircraft systems, or procedures, alignment with the standard will improve and simplify the effort. The question of aligning FMS nonstandard support as closely as possible with standard support should be addressed by the tri-service team.

Nonstandard support is a broad area, covering a spectrum of logistical nuances. It is an area open to additional and continued research. Analyses of specific nonstandard item support cases should be accomplished.

This author agrees with Phalen and Picard when they state, "these studies should show the channels through which each case flowed and the factors upon which the decision to provide nonstandard item support was based" (34:135). These analyses could identify logistical trends, and identify lessons learned.

In addition, a study of the FMS customers' views should be made. Information on how these countries view the USAF's support of their nonstandard systems would provide insight into perceptions and problems.

"The USAF has been faced with the issue of nonstandard item support for FMS customers for many years" (34:136). Until only recently, however, the issue had been viewed as a problem, rather than an opportunity and a challenge; an opportunity to provide support to our allies to strengthen not only their defense posture, but our own as well, and a challenge to provide adequate guidance and direction to that end. The changes in the nonstandard support concept found during the course of this research, have pointed toward that change of attitude. The nonstandard effort is gaining the visibility it should have had years before. Actions have been and are being taken to address problems which were identified, and programs are being implemented to encourage development of new and better methods of supporting nonstandard systems. The additional research recommended above is considered as a

continuation of this change of attitude. The additional information provided could insure the policies all continue to point in the direction of total and efficient logistical nonstandard support. The primary goal of this thesis was to gather, synthesize, and present the significant policy changes which have occurred, and identify those expected to have a significant impact on the future of the nonstandard support concept. This thesis was written with the hope it would in some small way assist those working with the nonstandard issue. In the presentation of problems, there is the hope of assisting in the sc ution.

Appendix A: Glossary of Acronyms

AECA	- Arms Export Control Acts
AFIT	- Air Force Institute of Technology
AFLC	- Air Force Logistics Command
AFLCR 65-5	- Air Force Provisioning Policy and Procedures
AFLCR 66-15	- Product Performance
AFLCR 72-2	- Cataloging and Standardization
AFM 67-1	- USAF Supply Manual
AFPRO	- Air Force Plant Representative Office
AFR 8-2	- Air Force Technical Order System
AFR 66-3	- Product Improvement Program
AFR 74-6	- Reporting of Quality Deficiencies
AFR 400-3	- Military Assistance and Sales Manual (MASM)
AFR 800-18	- Program Management and Systems Acquisitions for Foreign Military Sales
AFSC	- Air Force Systems Command
AFTO 22	- Technical Order System Publication Improvement Report and Reply
AFTO 847	- Technical Order Improvement Report
ALC	- Air Logistics Center
ASIP	- Aircraft Structural Integrity Program
ATC	- Air Training Command
ATTS	- Aircraft Technical Training Support
C3	- Command, Control, and Communication

CDRL	- Contract Data Requirements List
CIP	- Component Improvement Program
CLSSA	- Cooperative Logistics Supply Support Agreement
CMAL 79-1	- Controlled Multiple Address Letter--Logistics Support of Nonstandard Items
CMD	- Catalog Management Data
CONDEPOT	- Contractor Depot Support System
CONUS	- Continental United States
CSAR	- Configuration Status Accounting Report
CSIS	- Country Standard Item Support
CSTO	- Country Standard Technical Order
DISAM	- Defense Institute of Security Assistance Management
DLA	- Defense Logistics Agency
DLSC	- Defense Logistics Services Center
DO43	- Master Item Identification Control System
DOD	- Department of Defense
DOD 5105.38-M	- Security Assistance Management Manual
DSAA	- Defense Security Assistance Agency
DSC	- Defense Supply Center
EAIM	- End Article Item Manager
EAM	- Electrical Accounting Machine
ECP	- Engineering Change Proposal
ESF	- Economic Support Fund
FAA	- Foreign Assistance Act
FMS	- Foreign Military Sales

FRG	- Federal Republic of Germany
FSCM	- Federal Supply Code for Manufacturers
GSE	- Ground Support Equipment
H051	- Security Assistance Computer Centralized Accounting and Reporting System
HQ	- Headquarters
IAW	- In accordance with
ID	- Identification Data
IIAF	- Imperial Iranian Air Force
ILC	- International Logistics Center
ILCR 400-77	- Case Managers Guide
ILP	- International Logistics Program
IMETP	- International Military Education and Training Program
LG	- Director of Logistics
LOA	- Letter of Offer and Acceptance
LOR	- Letter of Request
MAJCOM	- Major Command
MAP	- Military Assistance Program
MASM	- Military Assistance and Sales Manual (AFR 400-3)
MDR	- Material Deficiency Report
MILSTRIP	- Military Standard Requisitioning and Issue Procedure
MMAC	- Material Management Aggregation Code
MOA	- Memorandum of Agreement
MODA	- Minister of Defense and Aviation
NAD	- Northrop Aircraft Division

NASMO	- NATO F-104G Starfighter Production Organization
NATO	- North Atlantic Treaty Organization
ND	- Local control stock number
NISS	- Nonstandard Item System Support
NRTS	- Not Reparable This Station
NSIS	- Nonstandard Item Support
NSN	- National Stock Number
NTE	- Not-to-exceed
NTM	- Northrop Technical Manual
OSD	- Office of the Secretary of Defense
P&A	- Price and Availability
PKO	- Peacekeeping Operations
PMD	- Program Management Directive
PRISM	- Program Real Time Information System for Management
RSAF	- Royal Saudi Air Force
SA	- Security Assistance
SAAC	- Security Assistance Accounting Center
SA-ALC	- San Antonio Air Logistics Center
SAMIS	- (International Logistics Center's) Security Assistance Management Information System
SAMM	- Security Assistance Management Manual (DOD 5105.38-M)
SE	- Support Equipment
SM	- System Manager
SMR	- Source, Maintainability, Recoverability (Code)

SOS	- Source of Supply (Code)
SOW	- Statement of Work
TCTO	- Time Compliance Technical Order
TDY	- Temporary Duty Assignment
TO	- Technical Order
TO-00-5-1	- Air Force Technical Order System Manual
TO-00-35D-54	- USAF Material Deficiency Reporting and Investigating Systems
TOMA	- Technical Order Management Agency
USAF	- United States Air Force

Appendix B: Glossary of Terms

Air Logistics Center (ALC): Each of any five Air Depots which support AFLC, which includes storage and distribution, maintenance, configuration changes, and other logistical requirements. The five ALCs are located at Warner-Robins AFB, Georgia; San Antonio, Texas; Sacramento, California; Tyndall AFB, Oklahoma; and Ogden, Utah.

Basic Ordering Agreement: A basic ordering agreement is not a contract. It is an agreement which is similar to a basic agreement except that it also includes a description, as specific as practicable, of the supplies to be furnished, or services to be performed when ordered, and a description of the method for determination of prices, consistent with the contract types authorized by this part, to be paid for such supplies of services. Either the specific terms and conditions of delivery or a description of the method for their determination shall be set forth in the basic ordering agreement. (1:91)

Case: A contractual sales agreement between the U.S. and an eligible foreign country or international organization documented by a DD Form 1513. An FMS case designator is assigned for the purpose of identification, accounting, and data processing for each accepted offer (DD Form 1513). (3:vi)

Configuration Accounting: The act of reporting and recording changes made to a base line configuration in order to establish a configuration status. (1:151)

Defense Logistics Agency (DLA): An agency created in November 1961 under the direction, authority, and control of the Secretary of Defense. DLA is responsible for providing, through DLA centers, the most effective and economical support of common supplies and services to the military departments and other DOD components. (1:204)

Defense Supply Center (DSC): An organization managed by the Executive Director, subject to the authority, direction, and control of the Defense Supply Agency (DSA), which directs and controls all assigned functions of management for specified commodities or common service activities for all military services. (1:205)

Engineering Change Proposal (ECP): The document which proposes system/equipment changes in accordance with applicable bulletins, regulations, and other directives. A term which includes both a proposed engineering change and the documentation by which the change is described and suggested. (1:259)

Follow-on Support: Recurring support required to maintain the operational status of the system/major item. (3:viii)

Foreign Military Sales (FMS): The selling of U.S. produced military equipment and services to friendly foreign governments under the authority of the Foreign Assistance Act of 1961, as amended. (1:303)

Ground Support Equipment: In the broadest definition, this may include any equipment required for the handling, servicing, protection, inspection, testing, maintenance, fabrication, assembly, disassembly, alignment, adjustment, check, repair, and overhaul of a weapon system, subsystem, assembly, component, part, or any combination thereof. (1:325)

H051: Security Assistance Computer Program Centralized Accounting and Reporting system. SAMIS was to replace this system. (46:22)

Indefinite Quantity Contract: This type of contract provides for the furnishing of an indefinite quantity within stated limits, of specific supplies or services during a specified contract period, with deliveries to be scheduled by the timely placement of orders upon the contractor by activities designated either specifically or by class. (1:340)

Lead Time: The time span from submission of a requirement until delivery of the spares/spare parts item to the using government activity.

Letter of Offer and Acceptance (LOA): This term is commonly used in reference to the U.S. DOD Offer and Acceptance (DD Form 1513), which contains an offer of the sale of items of services, with estimated costs and conditions. (1:387)

Letter of Request (LOR): A letter, message, or diplomatic note requesting material or services through FMS. (3:viii)

Materiel Deficiency Report: A notice received by a Contract Administration Office from a government receiving or using activity that relates to an unsatisfactory condition. (1:435)

Military Standard Requisitioning and Issue Procedure MILSTRIP): A uniform procedure established by the DOD for use within the DOD to govern requisition and issue of material within standardized priorities. (1:448)

National Stock Number (NSN): A two-part number assigned to each item of supply repetitively used, purchased, stocked, or distributed within the Federal Government. The first part of the number consists of the Federal Supply Classification. The second part of the number consists of a series of nine numerals and is known as the National Item Identification Number. (1:466)

Not Reparable This Station (NRTS): A status condition determined during shop processing of an item used to indicate that the item cannot be repaired at base level due to lack of authorization, technical skills, parts, facilities, manpower, or any other causes. (1:479)

Paper Gondola: The development phase of the nonstandard support procedures which culminated in Nonstandard Item System Support (NISS) concept.

PEACE HAWK: FMS program involving the sale of F-5 aircraft to Saudi Arabia.

Price and Availability Study (P&A Study): An action normally involving end items of equipment or certain services for which price and availability data are required by the recipient before a decision to buy. (1:536)

Program Management Directive (PMD): An official HQ USAF document used to provide direction and guidance to the implementing, participating, supporting, and operating commands to satisfy documentation requirements. (1:555)

Requirements Contract: This type of contract provides for filling all actual purchase requirements of specific supplies or services of designated activities during a specified contract period with deliveries to be scheduled by the timely placement of orders upon the contractor by activities designated either specifically or by class. (1:589)

Source of Supply (SOS): The MILSTRIP routing identifier code which identifies the activity as a potential source of supply used in the Automatic Digital Network to automatically route MILSTRIP requisitions. (21:1-3)

Spare: An individual part, subassembly, or assembly supplied for the maintenance or repair of systems of equipment. (3:viii)

Support Equipment (SE): Equipment which includes all equipment required to perform the support function, except that which is an integral part of the mission equipment. (1:672)

Time Compliance Technical Order (TCTO): A T.. providing instructions to Air Force activities for accomplishing or making a record of "one time" changes to standard systems, equipment, materials, munitions, and computer programs, or for imparting precautionary instructions relating to safety limitations or inspections of system/equipment or munitions. Compliance is required within specified time limits. (21:1-3)

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Captain Kathleen L. McLaughlin was born in Portchester, New York, June 18, 1954. Upon graduation from Mayfield High School in Las Cruces, New Mexico, she entered New Mexico State University on a Rotary Scholarship. In May 1976, she graduated with a Bachelor of Science degree, and in February 1978 entered the United States Air Force.

Captain McLaughlin received her commission on 18 May 1978, and served in various maintenance positions at McGuire AFB, New Jersey. These positions included Flight-line Maintenance Officer, AFCS/INST Branch OIC, 438 MAW C141B Project Officer, and Job Control Officer. In June 1982, she was transferred to Griffiss AFB, New York. There she served as the 211 Field Training Detachment Commander, and saw the first operational ALCM and B52 simulator come on board, as well as the new Offensive Avionics System.

From New York, Captain McLaughlin was assigned to the Air Force Institute of Technology where she earned a Master of Science Degree in Logistics Management. Her follow-on assignment is to San Antonio ALC at Kelly AFB, Texas.

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UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

AD-A161571

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED	1b. RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited.
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER(S) AFIT/GLM/LSM/85S-48	5. MONITORING ORGANIZATION REPORT NUMBER(S)
6a. NAME OF PERFORMING ORGANIZATION School of Systems and Logistics 6b. OFFICE SYMBOL (If applicable) AFIT/LSM	7a. NAME OF MONITORING ORGANIZATION
6c. ADDRESS (City, State and ZIP Code) Air Force Institute of Technology Wright-Patterson AFB, Ohio 45433	7b. ADDRESS (City, State and ZIP Code)
8a. NAME OF FUNDING/SPONSORING ORGANIZATION 8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c. ADDRESS (City, State and ZIP Code)	10. SOURCE OF FUNDING NOS. PROGRAM ELEMENT NO. / PROJECT NO. / TASK NO. / WORK UNIT NO.
11. TITLE (Include Security Classification) See Box 19	
12. PERSONAL AUTHOR(S) Kathleen L. McLaughlin, B.S., Captain, USAF	
13a. TYPE OF REPORT MS Thesis 13b. TIME COVERED FROM _____ TO _____	14. DATE OF REPORT (Yr., Mo., Day) 1985 September 15. PAGE COUNT 124
16. SUPPLEMENTARY NOTATION	

17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB. GR.	
15	05		Nonstandard Parts, Military Assistance, Policies, International

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

Title: NONSTANDARD SUPPORT IN USAF MANAGED SECURITY ASSISTANCE PROGRAMS: POLICIES AND IMPLICATIONS, 1977-1985

Thesis Chairman: Dr. Leslie M. Norton
Professor of International Logistics

Approved for public release: IAW AFR 190-1.
Lynn Wolaver 11 Sept 85
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20. DISTRIBUTION/AVAILABILITY OF ABSTRACT	21. ABSTRACT SECURITY CLASSIFICATION
UNCLASSIFIED/UNLIMITED ☒ SAME AS RPT. ☐ DTIC USERS ☐	UNCLASSIFIED
22a. NAME OF RESPONSIBLE INDIVIDUAL Dr. Leslie M. Norton	22b. TELEPHONE NUMBER (Include Area Code) (513)-255-4149 22c. OFFICE SYMBOL AFIT/LSMA

DD FORM 1473, 83 APR EDITION OF 1 JAN 73 IS OBSOLETE.

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SECURITY CLASSIFICATION OF THIS PAGE

Changes in FMS nonstandard purchases have prompted accompanying policy and procedure changes which have not, since the 1977 Picard and Phalen thesis, been investigated. This thesis gathered, synthesized, and presented the significant policy changes which have occurred since 1977, and identified the reasons for these changes. The current nonstandard policy (NSIS) had its beginnings with the policies developed for the Saudi PEACE HAWK Program. The Program started with the CONDEPOT system, evolved into the NISS system, and subsequently, the current CSIS policy. Although the NSIS policy (79-1) is not identical to the CSIS, the idea of total initial and follow-on support is the same. In 1979 the CMAL 79-1 was published as guidance, and since then a proposed update, CMAL 82-1, was circulated for coordination and approval. Although the 1982 update was not implemented, it did prompt, along with AFLC NSIS Study Group conferences, proposed changes to the nonstandard concept. These changes were consolidated into an ILC May 1985 letter and are being implemented. These changes, once implemented, will take the place of CMAL 79-1; for they more clearly define and expand upon nonstandard support requirements. Now in 1985, the guidance needed for nonstandard support is finally being clarified and formalized. The above research concluded with recommended areas for further research, and recommended areas of action for AFLC.

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